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A RECORD OF ARCHITECTURE AND CONSTRUCTION.

VOL. CX.—No. 3811. FEBRUARY 18, 1916.

FIRE AND OPPORTUNITY.

THE burning of the Houses of Parliament at Ottawa, a calamity which has awakened profound sympathy throughout the world, leads naturally to the thought of other fires which have led to noteworthy architectural changes, most of which—to be frank—have been to the advantage of the cities in which they have taken place. It was the siege of Athens by the Persians, and the destruction of her temples by fire, that made room for the architectural glories of the age of Pericles; national suffering followed by national achievement then, as usually since, operated as a spur to national pride, as a stimulus to national art, and to the fires of 480 B.C. may not unjustly be ascribed the splendour of the Parthenon. We all know that Augustus found Rome brick and left it marble—that is, that he replaced the congeries of mean and often mud-built streets with the stately buildings of an imperial city; it is less often remembered that the city which he thus created was practically wiped out by the fire of 66, and that it was the much-maligned artistic genius of Nero, with his strong Hellenic tastes, that laid out Rome upon a new and nobler plan, which, owing to internal disturbances and foreign wars, was finally only carried out by Domitian over twenty years later. That Emperor indeed was to Rome of the first century what Sixtus was to Rome of the later Renaissance; Domitian worked with Rabirius as Sixtus with Bernini, and many of the improvements of which Trajan finally got the credit were due in fact to his less popular predecessor, who himself carried out in many places the grandiose schemes of Nero. Most of the important buildings of imperial Rome which posterity flocks to visit date from the generations after the fire of 66; if we think away the Colosseum, the Arches, the Forum of Trajan, the bulk of the buildings on the Palatine, and all but the portico of the Pantheon, imperial Rome is shrunk indeed. Nor can we doubt that Rome, after the fire of 66, like London after that of 1666, was a healthier as well as a fairer city. The crowded quarters near the Tiber, the home of all the myriad strangers who flocked to the city, and whose presence made Cicero term her *sentina gentium*, the cesspool of the nations, were swept away; purification by fire was, and is, no idle word in matters of health, and those who had no Sabine farms to escape to from the smoke and noise of daily life in Rome found quarters better than they had had before. From the time of Augustus onwards building laws were strict; *insulæ* or flats were limited to five stories, and the increasing number of rich men's villas within and about the city minimised the amount of waste ground which had been used before for burial or the casting-out of bodies of slaves and other insanitary or inhuman purposes.

Rome was to endure many sieges, many conquests on the part of the barbarians, but even Alaric spared her the worst horrors of fire; and, in spite of being five times sacked by the Lombards, the city suffered less than might have been expected, though Gregory the Great wrote to the imperial Government at Constantinople, "For twenty-seven years we lived in terror of the Lombards, nor can I say what sums we had to pay them." Much more terrific, because more modern and carried out by a more civilised people, was the sack of 1527, but the Rome we think of, apart from classical antiquities, the Rome of the fountains and domed churches, of palaces and colonnades, is in great measure due not to disaster by fire or sack, but to the creative instincts and high artistic feeling of a succession of pontiffs who were able enough to appreciate the genius of their architects and decorative craftsmen and intelligent enough to give them a free hand.

So, too, the Fire of London—that calamity which we speak of without prefix as "the Fire"—with all that it did, was good in the disguise of evil. Like the Rome of Domitian, the London of Charles II. was fortunate in possessing an architect of supreme genius, to whom the chief features of the remodelled city were entrusted for a generation. Old London—the London of before the Fire—we can reconstruct from prints and drawings of itself and from parallels elsewhere, Chester and Ludlow, Oxford and the Newcastle of two generations ago; the city as we know it is due to Wren, from the soaring dome which to most of us is London to the little church of St. Benet, from Bow to the church of St. Magnus close by the river. The city inhabited since Roman days disappeared as if by magic, and on its ruins arose the City as we know it, shorn, alas, of many of Wren's churches, but still dominated by his genius!

The two supremely important lay buildings left untouched by the Fire were both, strangely enough, doomed to perish in later conflagrations—the picturesque buildings of old Whitehall, Inigo Jones's Banqueting House excepted, in the Great Fire of 1697, which swept away so much of historic and artistic importance, and the Houses of Parliament, the glow of whose destruction was recorded by Turner in a painting of his greatest period. Both of these fires were due to carelessness, and both did much irreparable damage; but we can at least console ourselves with the thought that Wolsey's other palace, Hampton Court, was a finer specimen of its age's architecture than ever was old Whitehall, and that the present Houses of Parliament, criticise them in detail as one may, are in the aggregate a noble pile, worthy of an imperial city. The loss of the Banqueting House or of Westminster Hall would have been a greater one for posterity than that of the larger and more rambling piles of buildings that made up old Whitehall and the earlier Houses of Parliament; it was better to lose some of the artistic treasures of Charles I. at Whitehall and the House of Commons whose rights he invaded than the building on whose floor he stood for his mock trial, or the fatal window of that Banqueting House which his father had built and he had finished, and, as many generations held, had consecrated with his blood.

The destruction of Moscow in 1812, commonly held to have been self-inflicted, which marked the turning-point of Napoleon's fortunes, was by no means that city's first experience of fire. At least four conflagrations occurred during the eighteenth century, in spite of Peter the Great's order that only stone houses should be built within the walls of the town an order founded on the ghastly experiences of the sixteenth century, when the Tatars burnt the city, leaving, it is said, only 30,000 inhabitants alive out of 200,000. The new Moscow that arose after the Napoleonic wars has, as a Russian city, that rare quality of the picturesque which is usually lost when a new town is built on the site of the old, and not even trams and railways can injure the impression that she makes on every traveller. We can only hope that other cities of Europe destroyed by the modern invader may be as happy in their reconstructors.

Rome has been fortunate in her rulers and architects; Greece in those who rebuilt her temples; England was supremely fortunate in having at call in her hour of need the greatest architectural genius whom she has yet produced; her Houses of Parliament were replaced by statelier if a less interesting successor; and while we sympathise with Canada in the calamity, perhaps the outrage, which she has undergone, let us hope that she, too, may find her Wren or her Rabirius ready to add his genius to what she has herself to offer, one of the noblest sites, one of the greatest opportunities, to be found in all the world. If this be so, we may again see creative art rising Phœnix-like from the ashes of destruction.

C

NOTES.

Carpenters' Hall Lectures.

A VERY interesting lecture was given on Wednesday last week at Carpenters' Hall on the Sculptures of Reims Cathedral by Mr. Arthur Gardner, which was illustrated by some exquisite lantern slides. The lecturer expressed his conviction that in destroying the wonderful thirteenth-century sculptures of the west front the Germans had done what would prove more disastrous to themselves than to the people the records of whose ancient tradition they had partially obliterated, and he hoped that in any future restoration of the building care would be taken to preserve the sculptures as they were. We agree with this view unless casts are in existence which would enable the restoration of sculpture to be practically so complete and accurate that, to future generations, it would convey the impressions and feelings that we who know the originals have felt. There are sculptors whose knowledge and skill are so great, and whose sympathies are so keen, that, given good casts, they might be able to produce work which would be almost identical with that of the French imagers. But however that may be, we may feel sure that the French, with their sure artistic insight, will not, when touching the sacred stones of Reims, do anything which the world will regret, for we have long passed the days when the mistakes made in the time of the Gothic revival are possible.

The Right of Criticism.

WE learn from a contemporary of an interesting decision bearing on the right of criticism in the public Press. Comments were made in a Dundee paper on a discussion which took place on the cost of an extension to a school, which the Chairman stated had cost about double the official architect's estimate, and proposed that his agreement should be revised. The local paper stated that under the present system it was understood that the Board's architect should carry out small works, while larger ones should be put out to competition, and added:—"The rule, as interpreted, is an absurdity, and puts a premium upon a certain kind of advice." The architect brought an action against the journal, arguing that the article accused him of being unfaithful to his trust and acting corruptly for his personal benefit. The first Scottish Court dismissed the action, the Court of Appeal upheld it, and the House of Lords agreed with the first court, Lord Haldane saying:—"Any person in the position of architect to a school board must submit to a large amount of public criticism—such criticism would not be permissible in the case of a private person. In such cases malice at law was rebutted and malice in fact must be proved." Personally, we think all depends on facts, but if these are not proved up to the hilt those who make such statements should be most severely penalised. With the ex-Chancellor's statement—"It is important that the Press should be at liberty to criticise fairly public men"—we are in complete agreement, though we may say that recent events leave us in considerable doubt as to the ability of public men to take in good part criticism which certainly contains little that is personal and is dictated by the desire to obtain efficiency without regard to persons.

Courts Emergency Powers Act.

WE may draw our readers' attention to an important decision of the Court of Appeal, delivered January 1, under the Courts Emergency Powers Act, 1914, in the case of Ness *v.* O'Neil. The plaintiff was the lessor of certain premises under an agreement which made the rent payable monthly, and which gave a right of re-entry if the rent remained unpaid for ten days after it was due. The rent was left unpaid for a longer period than ten days after it was due, and the plaintiff issued a writ to recover possession. Sect. 1 (1) (*b*) of the Act provides that no person after the passing of the Act shall "levy any distress, take, resume, or enter into possession of any property, exercise any right of re-entry, foreclose . . ." except after application to the Court. The writ had been obtained without leave of the Court and the defendant contended that the Act applied. The Court of Appeal have held, following a case, *in re* Farnol Eades, Irvine, & Co., where debenture-holders were applying for the appointment of a receiver, that the section applies to proceedings of a summary nature, and, notwithstanding the inclusion of the word "foreclosure," does not apply to proceedings in the nature of foreclosure by action. This decision is of importance to landlords, but it must be noted that, although an action can be instituted without leave, yet the judgment cannot be enforced by a writ of possession until leave is obtained.

Criticism or Abuse?

THOSE who are employed in any capacity in connection with the decorative scheme of Westminster Cathedral have much to contend with, because, in the nature of things, their task is a most difficult one in the present age. The number of architects who can design a building of outstanding architectural merit are few; the number of those who can direct the work of a body of craftsmen in the design and execution of a decorative colour scheme—controlling, guiding, and at the same time never cramping them—is fewer still. If, in the circumstances, the result is not all that extravagant fancy or idealism would have it, we may yet have what gives us lasting pleasure and is a credit to the æsthetic talent of the age. But the greater part of the letters which have appeared in the columns of the *Observer* on the Stations of the Cross and the decorations of the chapels might with reason have been consigned to the wastepaper-basket as being for the most part both ignorant and offensive. Most of the writers hide their anonymity behind combinations of letters and pseudonyms and would hesitate to repeat their views above their signatures. We suppose the reason we are not favoured with these effusions is that the writers presume that in an architectural journal they would be judged and found wanting, however picturesquely they compare the decoration of Westminster Cathedral with that of a bathroom or underground convenience. If some of the critics will send us out of their wisdom and knowledge alternative suggestions, showing what should be done, we shall be glad to illustrate them for the greater guidance of artists and of posterity!

Economy in Railway Travelling.

As, both during the war and for some time after it is ended, every class will be called upon to exercise strict economy, it seems a suitable time to raise the question whether the railway companies may not be wise to revise their policy of abolishing the second class and retaining the first class, and whether, in the altered circumstances created by the war, a more advantageous system, both for the companies as well as for the general public, would not be to abolish the first class and retain the second class, except possibly in the suburban districts where the interests of season-ticket holders are concerned. Even before the war broke out the first-class compartments were, on long-distance trains, comparatively empty, and represented unremunerative dead weight to the companies; but in the altered condition of economic affairs still fewer persons will be in a position to afford or feel justified in spending double the necessary amount for performing a journey, yet to many—and especially to ladies—the increased comfort and diminished crowding to be secured at a small extra cost, as is the case in the second class, is a very great convenience.

Doncaster Town Planning.

THE development of Doncaster has been checked by the war, but, as the housing problem is very acute, the Doncaster Rural District Council have determined to go on with their town-planning schemes in order to control effectively the character and growth of the new mining villages. A good beginning has been made, and the Local Government Board have been asked to sanction the formation of a third area. A great problem is caused by the low altitude of the ground, where at times large areas are actually under water. Very little of the land to the north and east of Doncaster is more than 20 ft. above the sea level, and as the fall of the Don and the main drains which enter it are very slight, the provision of adequate drainage is unusually difficult. In the Askern area already planned out, of 5,170 acres 2,436 are less than 20 ft. above the sea level. Regulations have been drafted and are receiving the consideration of the Local Government Board, with the object of preventing the use of the low lands for the erection of dwellings, though it may be utilised for industrial buildings, and one of the important provisions of the scheme gives the authorities power to differentiate on this point. One pleasing feature of the development so far has been the gratifying response of the colliery providing housing accommodation. They have willingly co-operated with the authorities. Their generous interpretation of their responsibilities is exhibited in the famous model colliery village at Woodlands; in the village at Park Lane between Carcroft and Owston Park, in connection with the Bulcroft Colliery, and in the progressive character of the admirable villages at Edlington, Askern, and Rossington. These form an example for future efforts in the same direction. In the meantime the steps taken by the local authority under the powers of the Town Planning Act, 1909, may render the development of the South Yorkshire coal field not only unparalleled in industrial expansion, but also in the preservation of the amenities of the district, which have been so ruthlessly sacrificed in the case of the development of the Durham coalfields.

Honours to Architects.

WE are very glad to record the fact that among those members of the architectural profession who have done distinguished service in the war is Captain H. P. G. Maule, of the Honourable Artillery Company, who has been awarded the Military Cross. Captain Maule distinguished himself in his professional career both as the designer of much admirable domestic work and as an untiring enthusiast in the cause of architectural education, and, as past Headmaster of the Architectural Association Schools, is responsible for much of the success of that very virile and useful body. It is also pleasant to hear that Lieutenant Maurice E. Webb, who left his professional work to join the forces, has been mentioned in Sir Ian Hamilton's despatch of December 11, 1915.

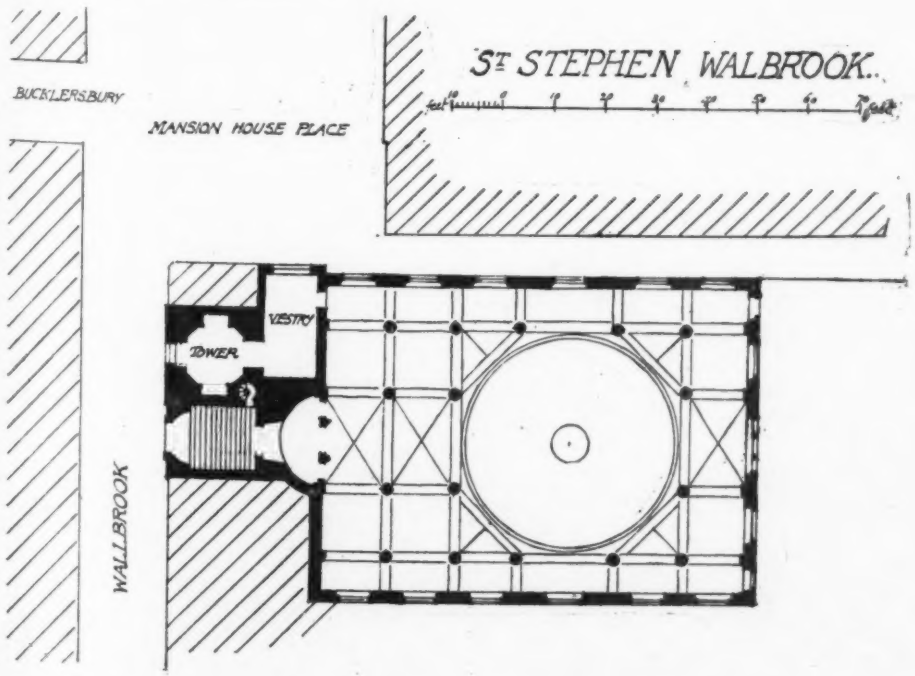
THE LONDON CHURCHES OF WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

No. XIII.—St. Stephen, Walbrook.

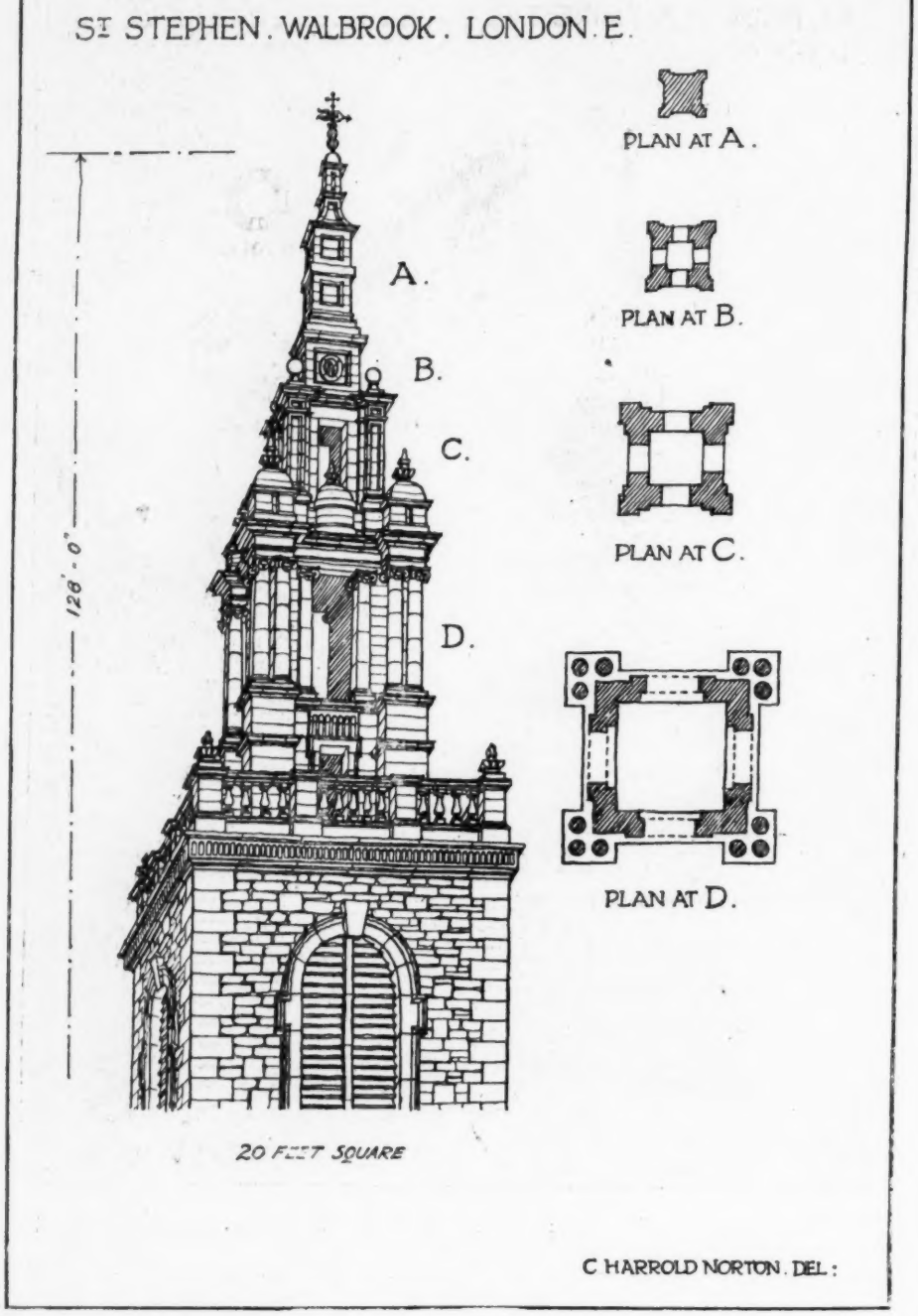
ST WALBROOK preserves the name of a stream which, rising in the swamps beyond Moorgate, flowed into the Thames at Dowgate, and on its banks was built a church dedicated to St. Stephen, which dates as far back as Henry I., and was rebuilt in the reign of Henry VI. through the instrumentality of Sir Robert Chicheley, who had been twice Lord Mayor. The church was repaired in the reign of Charles I., but was totally destroyed in the Great Fire. After the Fire the neighbouring church of St. Benet Sherehog in Pancras-lane was not rebuilt, and its parish was united with that of St. Stephen. The present church, which was one of the earliest to be rebuilt after the Fire, was completed in 1679 at a cost of £7,652, and it is singular, in view of the fact that many of the sites of Wren's churches are similar in area and shape, that he never attempted another design showing the same grasp of the effects to be obtained by masterly planning, for in the design of St. Stephen all the problems to be solved in a Renaissance church meet an adequate and fitting solution. The square space formed by the ranges of columns under the dome provides the congregational space required; the groined plaster vault of the centre compartment of the nave and the corresponding shorter transverse vault across express the cruciform idea; the church is fittingly marked, while the columned spaces which fill up the angles give a variety of perspective effects and a sense of space which is wanting in other churches of equal dimensions.

It is difficult to realise that the area covered is smaller than that of Bow Church; it is a curious subject for speculation that, having thought out this dream of architectural form, Wren could have been content to build such churches as Christ Church, Newgate, or St. Andrew's, Holborn, unless it is that the influence which prevented the execution of the first design for St. Paul's were active in opposing the design of smaller buildings in which mediæval tradition was ignored. On the other hand, Wren may have been dissatisfied with the external forms by which a church of the type could be expressed, or may, like many modern architects, have disliked repeating an idea or working on the same type. Be this as it may, St. Stephen, Walbrook, will be to all time an instance of the supreme expression of poetry in architecture—a proof that in the hands of a master combinations of form in Renaissance architecture can be made as expressive as the earlier combinations of mediæval and primitive styles, and that the thought conveyed in any style is infinitely more important than the medium through which it is expressed. The effect of the interior depends on the skill with which square, octagon, and dome merge into one another in the design of the centre feature and in the skilful disposition of the remaining columns, which, with a minimum interference to the seating accommodation, produce a maximum perspective effect. The pulpit and the woodwork are good, and, though the church suffered a certain loss in character in 1888, when the high pews were removed by Penrose, the interior has gained in apparent spaciousness. There are many good monuments in the church, the oldest of which, on the column to the south side, is in memory of William Lilbourne, who died in 1678; opposite to which is a very pleasing Baroque monument to Robert Marriot, a rector who died in 1689. Another fine monument is that to Percival Gilbourne, an apothecary, who died in 1694, which takes the form of a bust with architectural accessories. A very pleasing monument is that to G. Griffin Storestreet, a managing director of the Phœnix Assurance Society, who died in 1802. Externally the only noticeable feature is the steeple, which rises above the adjoining buildings and can be well seen from Mansion House-place. The repeated emphasis given by the successive square stages recalls a similar note which

Wren's Churches: St. Stephen, Walbrook.



(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)



distinguishes Spanish Renaissance towers, though the suggestion must be purely accidental; but the design is singularly happy, possessing unusual character and dignity.

No. XIV.—St. Bride.

The Church of St. Bride is usually coupled with that of St. Mary-le-Bow, since the two steeples are the most important architectural features of Wren's London churches; but St. Bride has the disadvantage of being closely surrounded by other buildings, which renders it impossible to study it to full advantage. The date of the erection of the first church is unknown, but mention is made of it in 1222. The living is in the gift of the Dean and Chapter of Westminster.

After the Great Fire the present church was built in 1680, the steeple not being completed till 1701. The total cost of the church was nearly £12,000. In 1764 the steeple was badly damaged by lightning, and 85 ft. of its height was taken down and rebuilt by Sir William Staines, who reduced the total height by 8 ft., leaving it 226 ft. in height instead of 234 ft. as originally designed.

The design of the diminishing stages of the steeple is beautiful if somewhat prosaic compared with the greater variety and complexity of that of St. Mary-le-Bow; its detail, and that of the church generally, suggests a somewhat freer rendering of the Renaissance than that adopted in St. Mary-le-Bow. Internally, this freedom is expressed in the piers of the nave arcade, formed of two columns which intersect one another, forming an elliptical pier set at right angles to the axis of nave, with a pilaster placed at their intersection, which carries the gallery front. These and other details suggest a Renaissance rendering of fundamental principles of Gothic design, which give a somewhat coarse and crude appearance, detracting from the bold and dignified conception of the interior, an effect which is emphasised by the unpleasing decorative scheme. It may be said that the beauty of St. Bride, like that of St. Mary-le-Bow, is mainly external, and that in spite of its dimensions it cannot be considered to hold a high place among the interiors designed by Wren.

Although the church has galleries they are not expressed externally, but are carried across the centre of the windows, which do not mark the internal divisions. The most pleasing details internally are the entrance door cases of the vestibule on either side, but the woodwork generally fails in refinement and interest, and is mechanical in effect. The most noteworthy monuments in the church are those erected to Jasper Nedham (1679), and Carey Stafford, a Whitefriars glass manufacturer (1760), and one to Isaac Romilly (1759), all of which are placed in the broad entrance vestibule. The best near view of the steeple is that obtained from Salisbury-square, nearly on the diagonal of tower, emphasising its somewhat monotonous effect, as can be seen by the excellent photograph which we give on page 140, taken by Mr. George Trotman.

CORRESPONDENCE.

The Erection of Munition Works.

SIR,—I understand from your columns that the Government have not given the architects of the country that consideration due to them by utilising their services where they could have been most valuable. Some weeks of investigation on the erection of munition works have been placed before the Ministry of Munitions, demonstrating that there had been much waste which might have been avoided, as well as delay, which would have been impossible under the supervision of properly-qualified men. I have proof of the absolute waste of hundreds of thousands of pounds in the erection of one munition works alone, and this a comparatively small one to those now going on in different parts of the country, reports from which I am now receiving. Cannot the Institute take the matter up and bring weight to bear upon the authorities, as the wastage must amount to thousands daily? ASSOCIATE.

Should Art be Artless?

SIR,—In the current number of the R.I.B.A. *Journal* there appears a review by Mr. Francis Bond of Sir T. G. Jackson's "Gothic Architecture in France, England, and Italy."

Mr. Bond, in the course of an appreciative analysis, quotes from his author the following passage:—

"The men of the Middle Ages did things beautifully because they did them unconsciously . . . they had the inestimable advantage of having no choice; they knew no other style but their own. . . . So long as our work is consciously imitated from what was done in other days and other conditions, so long will it remain unreal."

Mr. Bond describes this as an admirable pronouncement and further comments upon it thus:—

"Each architect knew nothing and cared for nothing but the work of his own day, and this narrow-mindedness was his artistic salvation. We moderns know too much."

It would seem that both Sir Thomas Jackson and his sympathetic reviewer have erred grievously against their own convictions in adding further to the prodigious mass of antiquarian lore, for, on their own showing, the purchase of their works is likely to contribute to our artistic damnation.

In view of the dicta of these two gentlemen it is amusing and disconcerting to take up the R.I.B.A. *Kalendar* and turn to the recommendations of the Board of Architectural Education, the "Advice to Candidates," and the imposing "List of Books Recommended to Students."

Some of our hard-working architectural aspirants will be pleased to learn from two such authorities that in "narrow-mindedness" lies their "artistic salvation," and that they may with a good conscience emulate the men of the Middle Ages and "know no other style but their own."

Is our whole scheme of architectural research and education a waste of time and money?

J. ALEXANDER PIRIE.

Wren's Churches.

SIR,—Mr. Lindley Latham's suggestions that models of these notable old churches should be made for permanent public exhibition will no doubt meet with general approbation, and I would advise any of your readers who take an interest in London's ancient buildings to go and view the charming models of "Old London Bridge," "The Tower," etc., now permanently on exhibition at the London Museum, Stafford House, S.W., made by Mr. John B. Thorp, and they should also see the realistic models he has just completed of the city's ancient gates, as they are exactly the kind of models suggested by Mr. Latham.

Mr. Thorp being an old friend and former pupil, I take deep interest in his beautiful work, and I should like to see an illustration of these gates in your journal, as I am sure they will give pleasure to many architects who are too far off to visit London.

FREDK. NESBITT KEMP.

SIR,—I quite agree with Mr. Latham's letter of last issue as to collecting all the information comprised in plans, models, and architectural literature of every building erected by Wren. I thought of suggesting to make a beginning with this valuable collection and placing it in or near the library of St. Paul's if accommodation could be obtained in this venerable edifice. All lovers of art treasure, I am sure, will give Mr. Latham's proposal their best support.

JOHN W. GRANT,
A.M.C.Inst.(Lond.).

Second-Lieut. C. Howard Jones. A.R.I.B.A.: The Military Cross for an Architect.

SIR,—The award of the Military Cross to Second-Lieut. C. Howard Jones, A.R.I.B.A., will probably interest the architectural and building professions. Mr. Howard Jones, who joined the Public Schools' Battalion at Epsom immediately after the outbreak of war, was up to that time on the architectural staff of H.M. Office of Works, Storey's-gate, Westminster, where he had been engaged since serving his articles with Mr. Ivor Jones, A.R.I.B.A. (Ivor Jones and Percy Thomas), Cardiff.

He has been responsible on two occasions for exceedingly useful work. As Brigade Scout Officer he has discharged difficult observation duties in the front trenches and has submitted reports and sketches of great importance. On another occasion, in company with a fellow-officer and two men, he figured in an exacting wire-cutting episode between the British and German trenches in the neighbourhood of Loos.

From the Public Schools' Battalion Mr. Howard Jones was appointed as Second-Lieut. to the 3rd Welsh, and after being trained with them at Cardiff and Porthcawl was drafted out to France attached to the 2nd Welsh, and was present at the German counter-attack after the battle of Loos.

IVOR P. JONES.

Pre-War Contracts and the Government.

We have received the following open letter on this subject, which is of particular public interest :—

The President, the National Federation of Building Trades Employers.

SIR,—I have read with considerable interest the account of the meeting of the National Federation of Building Trades, and particularly the speeches and resolutions on the subject of pre-war contracts.

I rejoice to see by the final resolution that the National Federation is to move, and I trust quickly, by approaching the Government upon this very urgent and serious question.

A very large number of people, not only connected with the building trade, but in all sorts of trades and businesses, are being seriously worried by the position in which they are placed. As the present law stands they have to bear the whole burden (however grossly unjust) of their inability, attributable solely to the war and to no other cause, to fulfil contracts entered into previous to the war (in a very large number of cases only a few weeks previously), while the other parties to the contract can exact the uttermost farthing, to the utter ruin of a large number of their victims, while they remain comfortable, because no remedy is given by the Common Law, as it has been interpreted by eminent judges in the past, who had never in contemplation such a war as we are now engaged in.

The condition of affairs created by this appalling calamity of our "State being at war" has therefore no real effective recognition in the courts.

I notice several of the speakers jumped ahead of the main object, which should be kept in the forefront of any action taken by the National Federation and allied associations, viz., to press the Government to pass a short Bill giving power to the courts to consider the effect of the state of war upon any case of pre-war contracts brought before it, and to have power to give relief and to do justice as between the parties, as the merits and details of each may in the discretion of the court require. If this Act is passed there is no doubt whatever that rather than face the ordeal of an exposure in the law courts the oppressive party in a contract would be willing to come to reasonable terms, whereas under the present position (where a contractor or lessee is suffering under an oppressive pre-war contract) he is like Dean Swift's "Man in his Shirt" against an unreasonable and greedy opponent armed to the teeth, with no remedy.

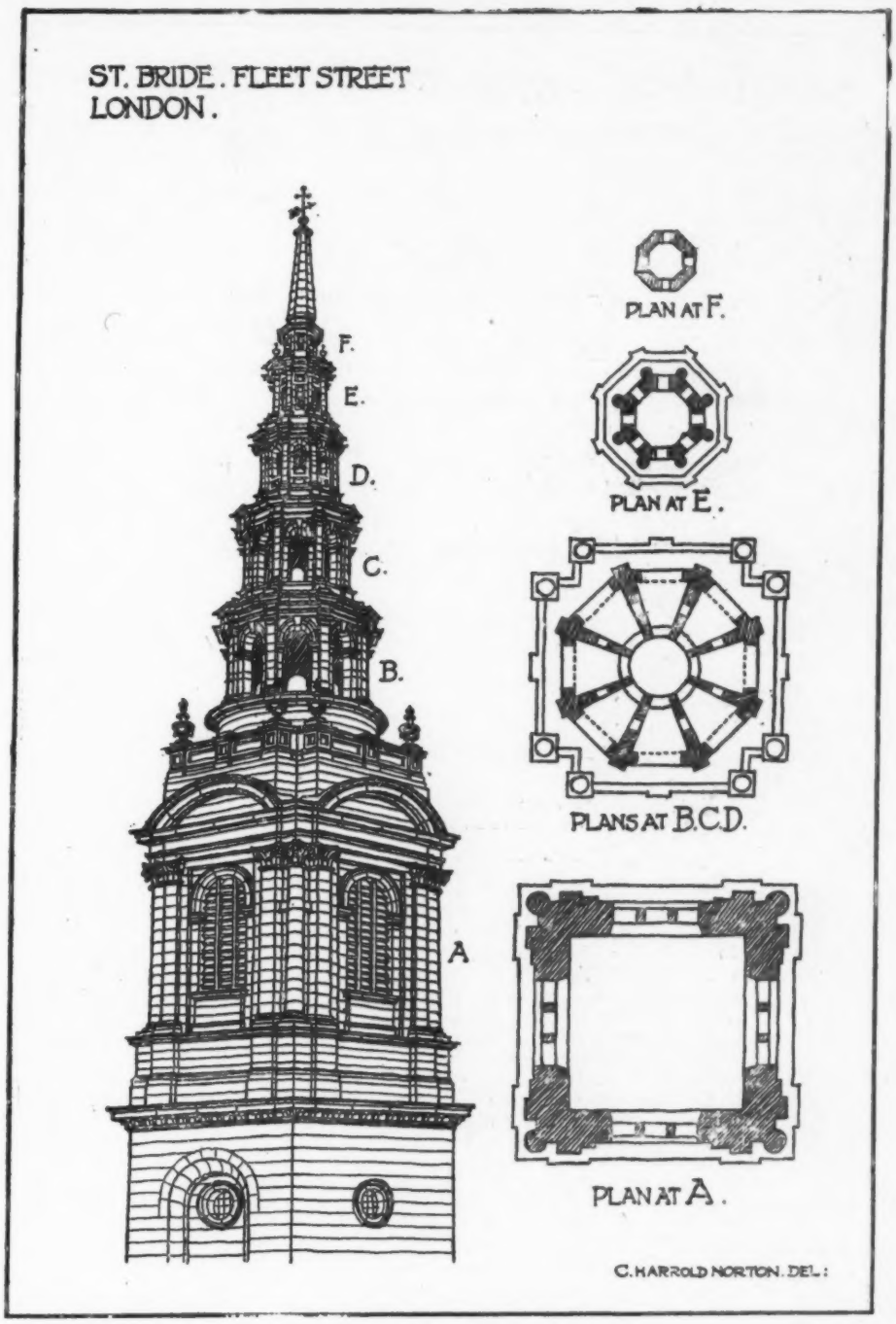
The Government are making appeals that every one is to do their utmost to assist the country and release "men, material, and money" for the country's assistance in the prosecution of the war, and I know of very many cases where people are prevented from doing all they might in this direction because of the serious position in which they are placed on account of these pre-war contracts and the responsibilities in connection therewith, tying them down to these affairs. There is no doubt that the Government from the very start have neglected a most urgent duty which should have been one of their first acts (as was done in France and Germany) immediately on outbreak of war, viz., to free their citizens from the consequence of pre-war contracts that were made impossible of fulfilment by the war, so that their countries might have the full benefit of all the energies of their peoples. Our Government has so far shelved this and other questions, with the results that we now find, having to approach and plead with the Government to do its duty, by knocking at its door, and repeatedly knocking, before it will act and permit justice to be done.

The question is therefore not one of asking the Government to make good losses, but it is a question of giving the right of entry to a court that shall have power to deal with any and every case brought before it upon its merits.

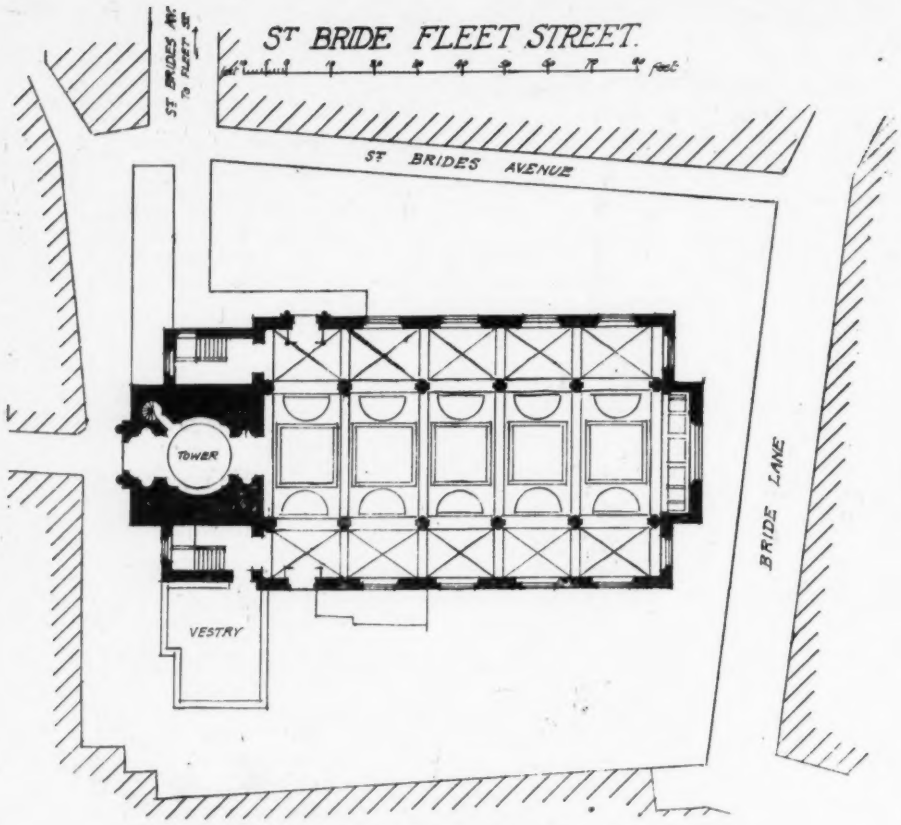
I trust that the National Federation will act quickly in this matter and press it (on these lines) upon the attention of the Government.

There are numerous cases that can be quoted all over the country of the oppressive state of affairs, not by any fault of the lessees or contractors, but solely on account of the war, and especially as proceeding with these contracts in most cases means competing with the Army and Government for "men, material, and money." Justice and the interests of the country call for immediate remedy.

HOWELL J. WILLIAMS, J.P., L.C.C.



Wren's Churches. (*See page* 138.)



(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)

Wren's Churches. (*See page* 138.)

Painters' Rates of Wages.

SIR,—Will you kindly allow me space in your journal to reply to the letter of Mr. Depree, Secretary of the London Master Builders' Association, as contained in your issue of February 11? Your correspondent makes statements which are somewhat misleading.

The London Association of Master Decorators and the Society of Operative House Painters and Decorators, having agreed on the question of wages, referred certain working rules to the arbitrator, on the basis of such wage increase.

On the day appointed the President and Secretary of the Builders' Association, Mr. W. Lawrence and Mr. Depree, attended, and asked to be allowed to state the case for the builders, and consequently to be present during the proceedings. After consulting with the Master Painters and Operatives, the arbitrator agreed to allow them to remain, provided they gave an undertaking that their Association agreed on the rate of wages. This they would not do, and consequently the matter was proceeded with after they retired.

The arbitrator, in giving his award, embraced the rates of wages, a copy of which I enclose.

Mr. Depree says that the reference to the builders as contained in my previous letter should be ignored. Well, that appears to be the case of the Association of Builders, and were it not for the fact that members of Mr. Depree's Association are in the favoured position of employing painters at ½d. and 1d. per hour less wages than the firms they compete against, and thereby ignoring the only existing agreement between workmen and employers in the painting and decorating trade in London, less notice might be taken; but in face of the unfair competition put up, such argument lacks substance.

On very numerous occasions firms outside either Association of employers quote your journal when we have occasion to approach them on the question of wages, and refer to the rates tabulated therein. And in conclusion I again submit that the rate you quote can with all fairness be so altered as not to act detrimentally to the workmen; and it is because I think you desire to be fair to the whole of your contributors that I refer to the matter.

JOHN BANCROFT,
London Organiser, Society of Operative House and Ship Painters and Decorators.

LAW REPORT.

Elliott *v.* Biggs.

ON Monday at the Westminster County Court his Honour Judge Woodfall gave his decision in this case, which had been remitted back to the County Court by Mr. Justice Coleridge and Mr. Justice Low from the High Court.

Mr. G. A. Scott and Mr. B. B. Stenham (instructed by Messrs. Rutland & Craufurd) appeared for the plaintiff; Dr. C. Herbert Smith representing the defendant.

The case, which has been reported in previous issues of the *Builder*, was an action brought against the executrix of the late Mr. T. Woodbridge Biggs, architect, for alleged professional negligence in connection with the erection of a greenhouse at Chalk Pit, near Maidenhead. At the time there was no complaint, but subsequently an action was brought by Mr. Biggs for his fees as architect on another contract. Later on Mr. Elliott complained of alleged improper supervision by the late Mr. Biggs, and said he had been put to extra expense. When the case was before the County Court the judge non-suited the plaintiff on the ground that the Court of Appeal had held that wherever an architect issued a certificate he was acting in a judicial or quasi-judicial character, and that no action could lie against him for negligence. The only ground for action in such a case was allegation of fraud, and no such allegation was made here.

When the case was argued before the High Court it was contended on behalf of the plaintiff that the County Court Judge had discretion to deal with the matter on the amended particulars, and that therefore he was wrong in non-suiting the plaintiff. Mr. Justice Coleridge, with the assent of Mr. Justice Low, sent the case back to the County Court on the ground that it was within the judge's discretion to allow or disallow amended particulars.

Mr. Scott, in asking the judge to rehear the case, contended that the amended particulars disclosed a good cause of action. He quoted the cases of Rogers *v.* James and Armstrong *v.* Jones in support of his contention.

Judge Woodfall remarked that the order which sent the case back to him was certainly very peculiar. As regarded his own decision when the case was last before him, he was very clear, and it seemed to him that the High Court order did not deal with his decision at all. He saw no reason to depart from his ruling that a plaintiff could not enlarge his cause of action in further particulars; all he could do was to amend his cause.

Mr. Scott said that his point before the High Court was that his Honour took too narrow a view of the position, and that he should have looked at both sets of particulars in deciding whether or not there was a cause of action.

The Judge said it seemed to him that the only point he had to consider was whether, in his opinion, the further particulars disclosed a cause of action.

Dr. Smith agreed that that was so, and submitted that no further particulars could disclose a cause of action unless the cause was shown in the first instance.

The Judge, in giving his decision, said that the issue of the certificate clearly gave no cause of action. The case was full of difficulty by reason of the way in which the order remitting it back to him was framed. But whatever the order was, he was, of course, bound by it. According to his reading of the order he had to determine whether the further particulars disclosed a fresh cause of action. In construing that they had to consider what was the cause of action alleged, and it was that the architect had been negligent in giving his certificate. In his view, that allegation gave the plaintiff no cause of action. Of course, the plaintiff might amend his claim, but he had not done so; all he had done was to give further particulars. He must construe those further particulars by having regard to the first particulars, which, in his opinion, did not give a good cause for action. The plaintiff had not disclosed a fresh cause for action, and therefore the application must be dismissed.

[*Photo.: Geo. Trotman.*

Wren's Churches: St. Bride, from Salisbury-Square, E.C. (*See page* 138.)

GENERAL NEWS.

Professional Announcement.

Mr. Colbourne Little, F.R.I.B.A., of Hong-Kong, has amalgamated his business with that of Messrs. Thomas, Adams, & Wood, of Canton. They will in future practise under the style or firm of Messrs. Little, Adams, & Wood, with offices in Hong-Kong and Canton.

Folkestone-Dover Road.

The direct route between Dover and Folkestone by the road near the top of the cliffs is now open, the Kent County Council having finished the construction of a new piece of road at Capel to replace that rendered unsafe in consequence of the effects of the landslide in Folkestone Warren on December 19.

Institution of Civil Engineers.

At an ordinary meeting of this Institution, held on the 8th inst., the following elections of Members, Associate Members, Transfer of Associate Members to Members, and admission of Students were reported:—Elected Members, 9; Elected Associate Members, 21; Transferred from Associate Members to Members, 25; admitted as Students, 9.

Sale of City Freeholds.

The freehold and leasehold premises, Nos. 88, 90, and 92, Cannon-street, 16, 17, 18, and 19, Laurence Pountney-hill, 1, Suffolk-lane, and 31, 32, and 33, Bush-lane, close to Cannon-street Station, covering a ground area of nearly 10,000 sq. ft., and having a rent roll of over £6,000 a year, have been sold by Messrs. Debenham, Tewson, & Chinnocks, Sir Howard Frank (Messrs. Knight, Frank, & Rutley) acting for the purchaser.

Government Architect, Burma.

We learn that Mr. T. O. Foster, F.R.I.B.A., who has been appointed Consulting Architect to the Government of Burma in succession to the late Mr. Seton Morris, has taken over his duties from Mr. E. J. Pullar, who has been officiating. The new Consulting Architect joined the Government of India nearly three years ago at Simla, where he has since been at work on different works and on the new Delhi. Previous to that he was practising at Westminster for seven years.

Germany at Work.

Mr. Joseph Pennell was at the outbreak of war in Germany, having gone there some months previously to arrange the Anglo-American Section of the Leipsig Exhibition of Arts and Crafts. During his stay he was given facilities for carrying out a large number of drawings of German dockyards, steel-works, bridges, and coal mines. The result of his work during the summer of 1914 will form the subject of an exhibition to be opened at the end of this month at the Leicester Galleries.

Recent Discoveries in Crete.

The Principal of King's College, Dr. R. M. Burrows, delivered a lecture at University College on "Recent Discoveries in Crete." Dr. Burrows said the war had practically put a stop to excavations in Crete during the last two years, and he went on to deal with the discoveries made within the last four or five years in the Palace of Cnossos, chiefly under the direction of Sir Arthur Evans and the British School at Athens. The restorations made in the stairways of the Palace had been quite successful, but he could hardly say that about the way in which the frescoes had been restored. The crystalline slabs were very soft, and had been covered with plaster to protect them from the Cretan storms. In the recent excavations the plaster had had to be cut off. It had generally been taken for granted that Cnossos was unfortified, but lately a French writer had challenged that view, and the latest discoveries seemed to show that it had some fortifications—at all events in middle Minoan times—and that later it became unfortified. Dr. Burrows showed how the whole place was drained, the system being borrowed from Egypt. But certain pipes that had been discovered were not drain pipes, as used to be thought, but pipes for the supply of fresh water.

Gift of Plaquettes to the British Museum.

We understand that Mr. T. Whitcombe Greene has presented his collection of Italian and German plaquettes to the British Museum.

Burne-Jones's House.

The house in which Burne-Jones was born at Bennett's Hill, Birmingham, was found to be on fire on Friday last week. Although much damaged, the house was not destroyed.

The Dearth of Houses.

The dearth of houses in Birmingham was one of the subjects discussed at the meeting of the Trades Council recently, when a deputation was appointed to wait upon the Lord Mayor in reference to the matter.

Royal Institute of British Architects.

We are asked to announce that the general meetings of the Royal Institute of British Architects will in future be held at 4 p.m. instead of 3 p.m., as announced in the *Kalendar* and other publications of the Institute.

London County Hall.

It has been decided to suspend operations in connection with the erection of the new London County Hall. This step, it is stated, has been taken at the instance of the Ministry of Munitions, which desires to have the workmen released for the purpose of aiding in the construction of munition factories in various parts of the country.

Site of the Old Royal Infirmary, Manchester.

The question of what use shall be made of the site of the old Royal Infirmary in Piccadilly, Manchester, is again to be discussed by the City Council, a resolution having been passed to rescind all existing resolutions on the subject and to reconsider the question. Among the suggestions previously made were that an art gallery and library should be erected; that the site should be used for tramway purposes only; that it should be retained as an open space, and that it should be used as a military drilling ground.

Greek Reliefs.

Mr. A. Hamilton Smith, Keeper of Greek and Roman Antiquities at the British Museum, read an illustrated paper on the 8th inst. on "Some Greek and other Reliefs Recently Acquired by the British Museum," before a meeting of the Society for the Promotion of Hellenic Studies held at the Society of Antiquaries' rooms, Burlington House. Photographs were shown of votive and tomb reliefs, the latter including single figure, double figure, and group examples. Mr. Smith mentioned that one of the Greek reliefs recently acquired was found in a London builders' yard, where it had lain for some years. Another was found in Jersey, where it had formed part of the pavement of a cottage yard, fortunately having been placed face downwards.

British Museum Closing.

The Director of the British Museum announces that, in accordance with the decision of the Government, the exhibition galleries of the British Museum (Bloomsbury) and certain of the galleries at the Natural History Museum will be closed to the public on and after Wednesday, March 1. The Reading-room (including the newspaper-room) will remain open to ticket-holders as before, except that from March 6 it will be closed at 5 p.m. instead of 7 p.m. until further notice. The room will be closed for cleaning, as usual, on March 1 to 4. The Students'-room of the Department of Manuscripts will remain open so long as sufficient staff is available for its service. Due notice will be given if it should be found necessary to close the room, in which case arrangements will be made for the supply of MSS. in the North Library for the use of such students as may satisfy the Director that they are engaged in studies of serious importance. The students' rooms of the other departments at Bloomsbury will be closed. Applications for access for special reasons should be addressed to the keeper of the department concerned. The photographic studio will remain open under the usual conditions. The students' rooms at the Natural History Museum will continue to be accessible to approved students.

An Architect's Estate.

Mr. John Sutcliffe, of Hazelwood, Hebden Bridge, architect, whose death occurred January 2 last, has left estate valued at £15,240 4s. 11d. with net personalty £8,931 19s.

Town-Planning Lecture in Madras.

His Excellency the Governor presided at the opening lecture on Town Planning which Mr. H. V. Lanchester, the Town-Planning Adviser to Government, delivered at the Engineering College. Mr. Lanchester's inaugural address was devoted to the ethics of town planning.

New Luton School.

The Education Committee of Beds. County Council reported at their last meeting that an architectural competition for designs for a new secondary school for girls at Luton had been carried out, and a set of designs prepared by Messrs. J. R. Brown & Sons, of Luton, had been selected. No steps can be taken at the present time with a view to commencing the building of the school.

The Old Windsor Elms.

The Windsor Town Council have decided to cut down between twenty and thirty old elms in King Edward VII. Avenue, near Windsor Castle. During a gale one of the trees fell across the roadway, and a committee was appointed to inspect the trees and report. It was decided by nine votes to eight that all the elms should come down, including the four trees forming part of the avenue to the Castle, subject to the approval of the Woods and Forests Department.

Artists' Rifles, O.T.C.

One effect of the Earl of Derby's recruiting scheme has been that a large number of professional men from the technical trades, including architects, engineers, and surveyors, having realised that they must no longer delay offering their services to the country, have applied to the Artists' Rifles, O.T.C., for direct enlistment. Moreover, of those who have attested under the scheme, many have felt impatience for their groups to be called up, and, solving the problem for themselves, have applied for and obtained transfer from Army Reserve B, in which Derby recruits are placed, to some regular or Territorial unit. This course is favoured by men whose education and social position render them eligible for commissions. The transfer of men who have been placed in Army Reserve B may be effected as soon as possible after they have been approved and found medically fit, or postponed until a later date, provided that at such later date the requirements of the service require the transfer. The corps has a special class for training members who desire to obtain commissions in the Royal Engineers and Pioneer Battalions, and for testing candidates for such commissions.

The Mineral Resources of Great Britain.

The Board of Agriculture and Fisheries desire to give notice of the publication of three volumes of Special Reports on the Mineral Resources of Great Britain, which have been prepared by the Director of the Geological Survey in response to numerous inquiries that have arisen through the conditions brought about by the war. In Volume 1 the uses, distribution, treatment, and output of tungsten and manganese ores are dealt with, and particulars of the mines, active and inactive, are given. Price 1s. The second volume deals with the sources, uses, and treatment of barytes and witherite (the sulphate and carbonate of barium). The mines from which the minerals are or have been raised are described in detail. Price 1s. 6d. Volume 3 of the series deals with the properties, uses, treatment, and modes of occurrence of gypsum, anhydrite, celestine, and strontianite. Details of the workings in all parts of Great Britain are given, with statistics as to output. Price 1s. Copies may be obtained through any bookseller from Messrs. T. Fisher Unwin, Ltd., 1, Adelphi-terrace, London, W.C., who are the sole wholesale agents to the trade outside the County of London; or from the Director-General, Ordnance Survey Office, Southampton.

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ILLUSTRATIONS.

Wren's Churches.

WE illustrate the steeple of St. Bride and the interior of St. Stephen, Walbrook, from "The Churches of Sir Christopher Wren," by J. Clayton, published by Messrs. Longmans, Green, Brown, & Longmans, which we give by the courtesy of Messrs. Longmans, Green, & Co. Further notes on these churches will be found on page 137.

Hotel at The Hague.

WE illustrate a fine design for a Hotel at The Hague the execution of which is for the time being postponed.

CHARING CROSS BRIDGE.

AN inspection of the drawings deposited with the South-Eastern Railway Company's Bill reveals the fact that it is intended to strengthen the eastern half of the existing bridge by encasing the iron columns in stone work and building segmental stone arches between them. These are to be 25 ft. high in the centre above Trinity high-water mark and 15 ft. high at the springing, which leaves a space of 7 ft. between the intrados of the arches and rail level.

In order to convince the powers that be that the proposals are reasonable, elevations of Waterloo and Westminster Bridges are submitted. The former has arches of 120 ft. span with elliptical arches, with height in the middle of 20 ft. 6 in. The latter has eight arches of spans varying from 120 ft. to 94 ft., and heights varying from 20 ft. to 15 ft. 6 in. The new arches will be of spans varying from 147 ft. to 140 ft., owing to the fact that there are no projections required next existing piers.

The spans and heights are ample, but the appearance from the bases of the new composite bridge, with its unequal spans and the weakness of the iron columns conspicuously emphasised by contrast with the new piers behind them, and the western half of the lattice bridge overhanging the stonework will be worse than it is at present.

The present time is perhaps hardly one in which to press for æsthetic considerations nor to hinder a railway company which is doing great national service in the perfection of its arrangements, which demand a fuller use of this bridge. At present it can only carry two trains at one time, and it is now felt to be necessary that it should be able to carry four trains at one time. But it is by no means clear that the work, which is estimated to cost £150,000, will be completed in time to be of use for the emergencies for which it is required, nor can we see why it should not be possible to entrain and detrain troops at the Waterloo Station by temporary arrangement with the London and South-Western Railway.

The outlay contemplated is not large, and possibly the extra ugliness achieved by it might hasten the removal of the bridge, but we think there is a much more urgent reason for opposition than that caused by the appearance of the bridge, and that is the fact that, despite the need for economy which will inevitably impede all such schemes, the necessity for a road bridge at Charing Cross is so great that any outlay now which would make its ultimate realisation more difficult should be opposed.

Waterloo and Westminster Bridges are inadequate at their best, and with weakening foundations and increased loads either may have to be closed at any time. This would throw extra work on the other, and the traffic obstruction would be insufferable.

We hope, therefore, notwithstanding all that can be said for emergencies, that this expense will not be sanctioned.

ARCHITECTURAL SOCIETIES.

The Architectural Association of Ireland.

An ordinary meeting was held on Thursday, February 3, when Mr. R. M. Butler, F.R.I.B.A., read a paper on "The Gothic Revival and its Effects." Mr. H. G. Leask presided. The paper traced the revival of Gothic architecture, which had fallen into disuse for some hundreds of years, from its first beginnings, at a house commenced by Horace Walpole in 1753 and finished in 1770 at Strawberry Hill, which was rebuilt in "the Gothic taste," as it was then called, and explained some of the causes of the failure of the revival to re-create a living style of architecture such as existed in the Middle Ages, and referred to the influence it exercised upon modern architecture of the present day in these countries. Walpole's initiative set the fashion, and later the novels of Sir Walter Scott had no small share in popularising the taste for Gothic. The earlier churches and houses built in the style were mere travesties of mediæval art, as their designers were ignorant of its principles. The first important building in England built in this style was the Houses of Parliament at Westminster, designed by Sir Charles Barry in 1835, who was assisted in the design of the ornamental details by A. W. Pugin. It was one of the finest modern public buildings in Europe, and far and away the best erected by the British Government. Later, the influence of Pugin's writings, the great Exhibition of 1851, the publication of the works of John Ruskin, the Oxford Movement, and a variety of other causes led to Gothic becoming the dominant style of the mid-nineteenth century, eclipsing traditional English classical art, which had prevailed until well into the century. By 1850 Gothic was in full swing in England, and had been introduced into Ireland, and to doubt its superiority was considered evidence of bad taste; it was then deemed the only possible style for a Christian church. Gothic also came into vogue for secular purposes, but the modern version was an incongruous and artificial form of design, in that it neglected alike the traditional elements of the old domestic work and the conditions of modern times. The growing cheapness of foreign travel, the writings of Ruskin, and other factors brought about the introduction of foreign and exotic features, the taste for which rapidly developed, proving a wholly regrettable influence, which tended later to discredit the revival movement. The copyism and adaptation of mediæval architecture was carried out too literally and with too little regard for modern requirements and conditions. In the late "seventies" a change took place in England, the foundations of a fine school of domestic architecture, superior to that of any other country, were laid, and the ecclesiastical side of the movement took on a newer and more living character. The pioneers of this latter phase were the late J. D. Sedding, the architect of Holy Trinity Church, Chelsea, the late G. F. Bodley, R.A., and J. F. Bentley, the architect of the new Westminster Cathedral, who succeeded in recovering a good deal of the quality of mediæval art, but adapted to modern needs. The work of this period in England might be described as the best modern ecclesiastical work of Gothic type in the world, although it could not be said that the Gothic revival as a whole had been a great success from the standpoint of the advancement of architecture. The Gothic revival in Ireland followed on similar lines to that in England; it was not progressive in character, but adhered to the early ideas and to the foreign influence which had done so much harm to English architecture before it was discarded in that country. The Gothic revival in Ireland had failed to create really great architecture, partly because of its entire disregard of native Irish traditions in architecture, and by reason of the extent to which it fell under English and foreign influence in the beginning. It was lamentable that no effort was made to derive inspiration from the native remains. Nevertheless, some very creditable work was done. The lecturer referred to the difficulties under which the Irish people laboured at the time the great church building era began in this country, and the absence of great mediæval traditions like those of England, although Ireland did possess a distinct mediæval Gothic architecture of its own. The Gothic revival had done relatively greater harm to the art of architecture in Ireland, because it destroyed the classical traditions that prevailed in the eighteenth and early nineteenth century, when the public buildings and mansions of Dublin rivalled those of London, and set up nothing equally good. The lecturer finally described the rise and progress of the modern school of Gothic architecture in America, which has now reached an exceptionally high level. The most important churches and colleges in the United States are designed in this style, including the immense work recently finished at the West Point Naval Academy. The lecture was illustrated by a large number of lantern views of modern English and Irish churches, and slides of American Gothic architecture, lent for the occasion by Mr. Ralph A. Cram, of Boston.

On the motion of Mr. Beckett, seconded by Mr. Lynch, a vote of thanks was passed to the lecturer.

FIFTY YEARS AGO.

A Self-Loading Ship.

M. DE CORAUX, a Lyonnese, has invented and constructed a ship which can load or unload itself automatically in forty minutes. The captain and the mechanician are the only living crew on board, the working and manipulation of the vessel and cargo being all performed by steam applied to most ingenious machinery. The loading is carried on by trucks and wagons, which can contain corn, flour, bales, cattle, horses, barrels, etc. The vessel is, as may be expected, of a peculiar disposition; but its exterior bears all the signs of seaworthiness. The great revolution is on the deck and in the interior. The former is covered with lines of rail, reaching from one extremity to the other, while, at midships, there are two turntables. Front and rear are two or four immense cages, containing eight, twelve, or sixteen wagons, of the same size as our railway wagons. The rails on which the wagons rest are adapted exactly to the rails of the deck. A cable is hooked to the wagons, which traverse the deck throughout its length; and the stern of the boat having been previously placed on a level with the quay, which is also furnished with rails, or may be perhaps a portion of a terminus, the wagons glide without the least interruption from the vessel to the land, and *vice versâ*.

[*** We give the above extract from the *Builder* of February 17, 1866.—ED.]

CONSTRUCTION SECTION.

TEMPORARY BUILDINGS FOR WAR PURPOSES:

II.—SUBSIDIARY POINTS OF IMPORTANCE.

BY T. P. BENNETT, A.R.I.B.A.

THE broad and important principles which must govern any scheme of temporary buildings have been set out in a previous article, but after these have been settled there are many things which must be borne in mind and which must receive careful consideration before the buildings are satisfactorily complete.

The elevations call for attention. In a permanent building they call for primary attention, but in a temporary scheme they must take a place of distinctly secondary importance. It is impossible, however, to ignore them altogether, and the treatment of the detail will naturally receive the attention of the architect. No special features can be introduced—every part must be absolutely necessary to the structure—and it is only in the handling of practical objects, general massing, and the use of paint that originality can play its part.

A well-proportioned building is extraordinarily effective, and well-proportioned openings are likewise of the greatest value. In the design of many buildings the set conditions of the problem dictate the general lines of the composition, and several distinct classes of buildings will therefore be considered in turn.

In designs involving the housing of munitions workers or aliens in compounds the dining hut is often the building of greatest importance, and by reason of its prominence upon the general plan it will attract attention. Frequently these buildings are 50 ft. wide and are covered with a Belfast roof. In these cases it is unwise to introduce roof-lights, because by so doing difficulty will be experienced in dealing with the purlins. Ventilators should be placed above the centre at intervals of about 25 ft. or 30 ft., and should be constructed either with sashes hung on centres or with louvres. This is the only means of breaking the sky-line that can be employed, as chimney-stacks will not exist. Beyond the general lines of the buildings the eaves and the windows are the only points giving any opportunity for treatment. The eaves may, however, be given a large projection, and by this means produce an effective shadow, while a continuous band of windows between the posts carrying the trusses is both logical and attractive. The doors break the monotony of the front and may be made points of interest. A sketch for such a building is shown in Fig. 1. The roof is covered with felt and the sides with weather-boarding.

Office buildings give rather more scope, because in many cases the arrangement of the rooms allows a certain amount of latitude. A rectangular building must be considered almost a necessity, owing to the importance of cost and speed of construction, and too much licence cannot therefore be entertained. Lavatory blocks should be connected to the main building by a short corridor, as in hospital construction, or else built outside the main lines formed by the boundary of the principal rooms and entered by a door in one side only. By this means all the plumbing is accessible for repairs, and leakages from defects due to hurried construction do not injure the surrounding structure. If such defects exist they can, moreover, be seen and remedied. If a hard internal surface is required, it is often cheaper to use 4½-in. brickwork rendered both sides for the lower part of the sanitary wings than to employ brick nogging and plastering. The surface of the cement looks well when distempered cream colour or tarred, which will respectively be in contrast to or in harmony with a dark-stained weather-boarded building. The picturesque nature of these blocks is indicated in Fig. 2, as is also the hipped end to the roof, which was previously mentioned as desirable for the sake of stability. A plinth can be added where continuous sleeper walls are used by distempering or tarring the brickwork. All office blocks should have these sleeper walls, as they will otherwise be extremely draughty. Huts of a very temporary nature for munitions workers and others are weather-boarded down to ground level only and built upon piers. Housing schemes must likewise be planned upon a plain rectangular lay-out. Curves or unusual angles or a variety of designs and variations must be avoided. All of these things cause delay and expense, and, however desirable they may be from an artistic point of view, they should under no circumstances be allowed. Three or four types of buildings must be arranged and the whole of the dwellings must be made to conform to these types. Alterations should be made in colour and occasionally in material, but these alterations do not affect the general setting out and commencement of the work.

A plan and elevation of a block of buildings for such a scheme are shown in Figs. 3 and 4, and in this arrangement it will be noticed that sections containing any multiple of two houses can be erected with equal facility. By this means the whole length of a road can be set out from one group of dimensions. The angle houses are shown to be of two stories. This is permissible upon both architectural and practical grounds. The former needs no explanation, and for the latter it will be easily realised that in all factories there are a considerable number of leading hands and foremen, who demand, and rightly demand, a superior dwelling to that occupied by the ordinary workers. The angles of the roads are the best sites for these superior dwellings, and allow for the housing of foremen next to workers, where day and night shifts are worked. One set of men do not by this means disturb the others when they go on duty.

Disconnected blocks are preferable to continuous terraces from a hygienic point of view and for purposes of drainage. Brick stacks and fireplaces should be employed in dwellings, owing to the serious risk to human life which would occur in case of fire.

Weather-boarding is the most common and most effective material for the sides of all structures, and, as previously mentioned, is also the cheapest. Rebated weather boards should be employed in huts used as habitations. Sometimes the surface of the wood is left rough, but the knots make it unsightly. The best finish is given by two coats of carbolineum "Stop rot," or "Solignum." These materials can be obtained in many good colours; they are cheap and can be applied rapidly, and if necessary by unskilled labour. Wrot woodwork must be painted, but priming with red lead can be omitted, and "Duresco" used in its place. One coat of "Duresco" and two coats of lead and oil colour are sufficiently good for all purposes. Many colour schemes will suggest themselves, but white or battleship grey, coupled with brown boarding, is most effective, although dark green will look well in some situations. Brickwork is generally built with Fletton bricks, and in order to avoid its unsightly appearance it can be coated with tar or distempered. In the case of buildings constructed with 4½-in. walls reinforced with hoop-iron, and rendered inside, tar for the bottom portion and cream or yellowish paint or distemper for the upper half will give a delightful effect at a very small outlay. C.I. gutters and R.W.P.'s of light iron are used if iron is permissible, and are painted two coats. In certain buildings used for projectile factories lead and iron may not be employed, and in these cases wood "V" gutters are used and zinc or tinned metal R.W.P.'s.

The finish of the interior must next be the subject of consideration. Many buildings require no special lining, and the rough woodwork plaster, or brickwork is merely distempered. This applies to stores and factories, except those in which the walls must be dust-proof. For rooms which have to present a better appearance, 3-ply boarding was at the commencement of the war generally employed. The cost ran about 7s. 6d. per square for second quality, 3–4 mm. in good sizes. The price is now about 13s. 6d., and is becoming prohibitive. Three-ply is expensive to fix owing to the fact that it is necessary to insert nogging pieces to take the horizontal edges. Some of the substitutes are very absorbent, and will not stand rough wear, and for these reasons they are to be avoided. Matchboarding is the most satisfactory material and is easily obtainable. As it is covered by no patent it can be turned out from any mill, and this point is often of great importance. Uralite and other asbestos boards are to be preferred in places where fires are likely to occur, though the cost is somewhat in excess either of 3-ply or matchboarding For office linings, plaster slabs screwed to the studs make the best finish, and up to the present no difficulty has been experienced in obtaining large quantities. Nogging pieces must be inserted as in the case of 3-ply and Uralite to take the edges. Dust-proof buildings are lined with match-boarding covered with two coats of varnish.

The fireproofing of wood buildings requires consideration, and, as suggested above, it is necessary in some cases to line them throughout with Uralite. Certain other precautions should, however, always be taken, the first of these being the rendering of the roofing felt. Many of the felts employed are very liable to ignite if sparks fall upon them, and to guard against this they should be covered with a coating of cement grout laid on with a brush; ½ in. of cement rendering has been tried, but it is found that the sagging of the roof causes the cement to crack, the cracks hold water and cause the roof to leak. Asbestos sheets must be placed at the back of stoves, and sheet-iron or asbestos should be put for them to stand upon. Where sheet-iron stove pipes are employed they should be passed through a sleeve in the wall or roof made of a section of glazed earthenware pipe and filled with cement. Where the pipe passes through the wall immediately at the back of the stove, and the latter is likely to be heavily banked with coal, this precaution will be insufficient, and the partition must be built of brickwork or brick nogged for an area of about 2 ft. by 2 ft. around the pipe.

The surface of the studding where the buildings are used as offices or as private dwellings should be covered with lining felt before it is weather-boarded, in order to make the huts draught-proof, and to maintain an equable temperature.

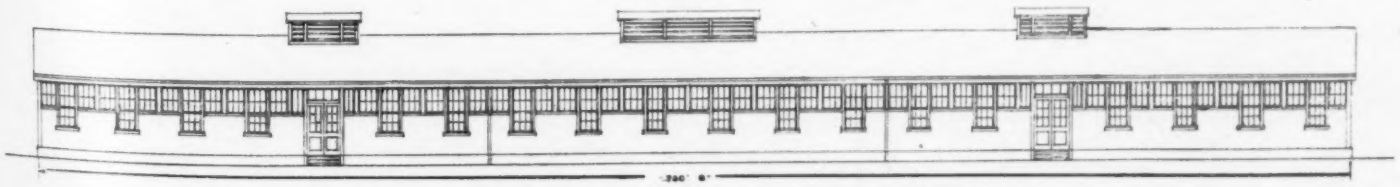


Fig. 1. Elevation of a Dining Hut.

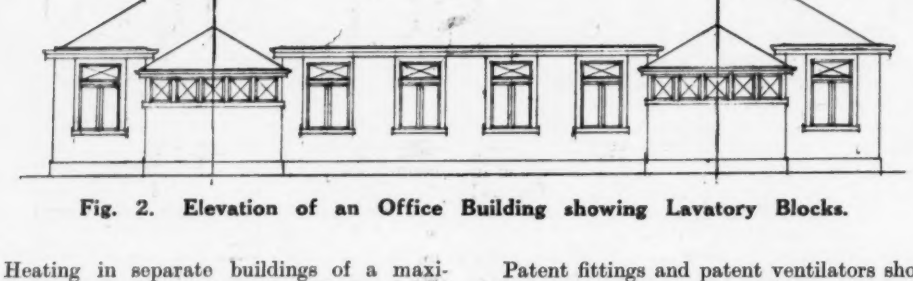


Fig. 2. Elevation of an Office Building showing Lavatory Blocks.

Heating in separate buildings of a maximum size of about 80 ft. by 20 ft. should be by means of a C.I. stove with a sheet-iron pipe passing through the wall at the side of the building, and carried above the roof. Larger buildings than this should be heated by means of a low-pressure hot-water system. If a central system is adopted, flues are avoided and the concentration of fuel and labour causes economical working when the buildings are in operation. Delay may be experienced in obtaining pipes and radiators, and these should therefore be ordered as soon as possible. Galvanised pipes are almost unobtainable.

The cost of the buildings varies enormously, and it is extremely difficult to give any figures which will be of value. As a basis, however, the following prices may be used. An office building, built with studding weather-boarding, boarded floors, boarded and felted roofs, and glazed steel skylights, the inside of walls and ceilings lined with plaster slabs, the whole complete with foundations, could be built for 4d. per foot cube six months ago for contracts larger than £10,000 on accessible sites. The cost at present would be about 4½d. This is exclusive of a railway or other special means of access. Measurements to be taken from the top of concrete to half-way up the roof. Buildings under £2,000, in different places, run, however, to as much as 8½d. per foot cube for exactly similar construction, so that some idea may be gained of the extreme range of prices that are received. The timber taken alone will cost from about 1d. to 1½d. per ft. cube of the building. This figure may be useful if the Government method of purchase is adopted, a system which, in spite of the adverse criticism it received twelve months ago, is proving one of the finest commercial transactions carried out for any Department since the commencement of the war.

With the question of cost is closely allied the question of saving either wisely or unwisely. The former may be considered first, and for the moment may be confined to questions of material and construction rather than to those of organisation and planning. Among points of permissible constructional saving may be placed the reduction of all scantlings. This may be made a very fruitful source of economy. Economy in the construction of floors may be secured in the case of hospitals by laying sheets of corrugated-iron upon wooden joists and covering the same with asphalt, the asphalt to be ½ in. thick over the top of the corrugations. By this means all the cost of filling and concrete is obviated. Interior woodwork in roofs can be wrot and coated with Solignum instead of being lined. The roofs and walls of stores are seldom lined and are generally distempered. Such a building, however, is very draughty. Doors may be 1½ in., windows devoid of mouldings. Architraves, 2½ in. by ¾ in. strips obtained very frequently from waste and off-cuts. Saving should not be effected in roof glazing, where it may leak and cause endless discomfort, unsightly water stains, and large amounts for subsequent repair. Patent systems executed by reliable firms should be employed if possible. If the conditions of the factory preclude the use of metal bars, wood must perforce be employed; but they should then be of substantial section and perfectly rigid. Cheap material or workmanship should never be allowed in gutters, and sanitary fittings should be plain solid patterns of reliable manufacture.

Ranges of lavatory basins may be obtained which have a channel cast as part of the fitting, or an open channel on the floor. In either case the use of several traps is obviated and a large amount of plumbing is saved.

Patent fittings and patent ventilators should be avoided as far as possible unless it is definitely known that a good stock is held and is immediately available.

The preparation of the drawings needs careful supervision, and they should be made so that they will fully explain the scheme, but do not contain unnecessary or elaborate detail. It is highly important that they should be well dimensioned and that the dimensions should be accurate. They should also be fully coloured in distinct colours, and if executed by a large number of draughtsmen they can be made to look thoroughly workmanlike if one man does the whole of the printing. Walls and other parts should never be blacked in.

Good prints can be obtained from pencil tracings upon tracing-paper, and the lettering can be easily read if it is added in ink. It will be necessary to make a set of drawings for each builder who is asked to tender and to send it to his office.

A tender can be prepared for almost any temporary scheme in six days, and the work can be executed with great rapidity if it is properly organised. Fifteen thousand pounds' worth of temporary offices, built in two blocks, have been erected ready for occupation in five weeks. A small store with an office attached has been completed in seven days, the cost being £800; £50 of this was due to speed alone.

Continuous Sunday work or long hours of overtime are only means of wasting money and should never be allowed unless two gangs are employed. For extremely urgent work this is generally done, but for other cases three or four hours is the maximum continuous

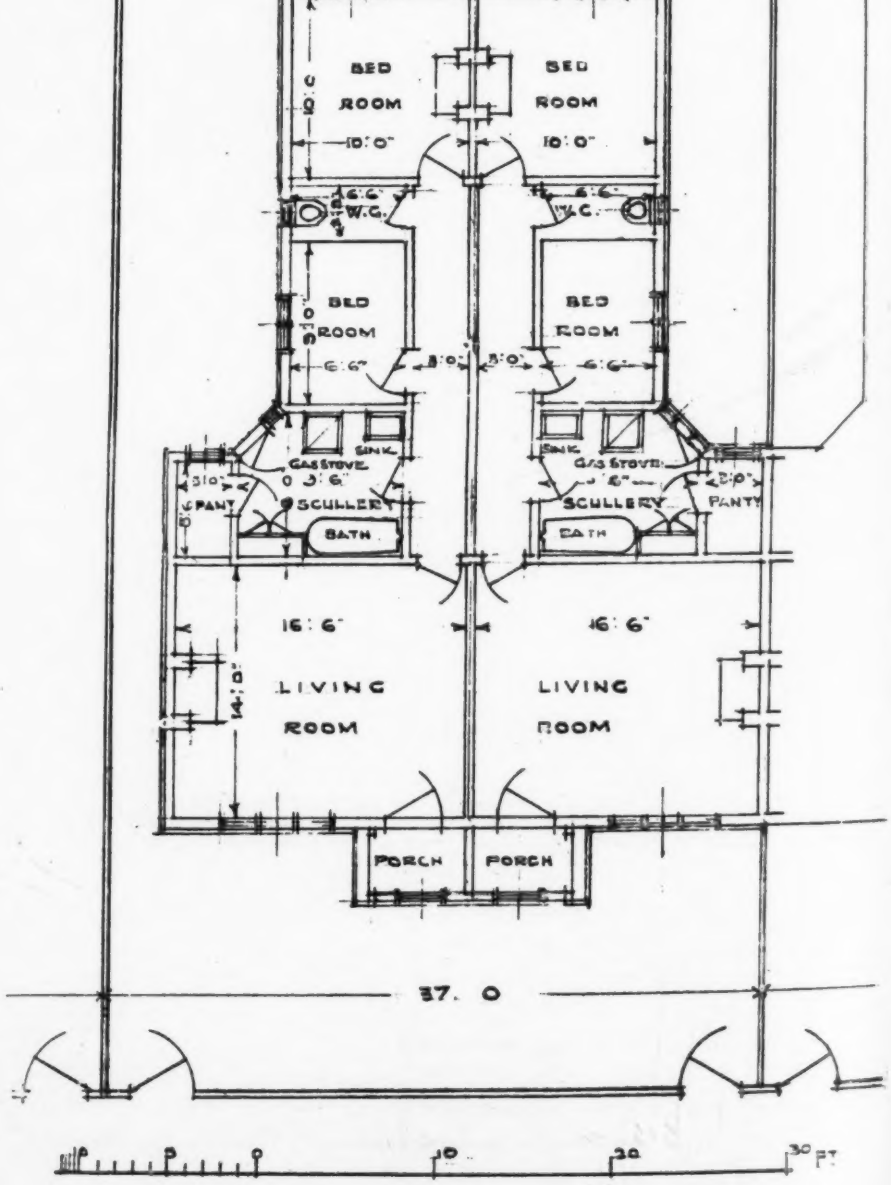


Fig. 3. Plan of Four Houses in a Scheme for Housing Munitions Workers.

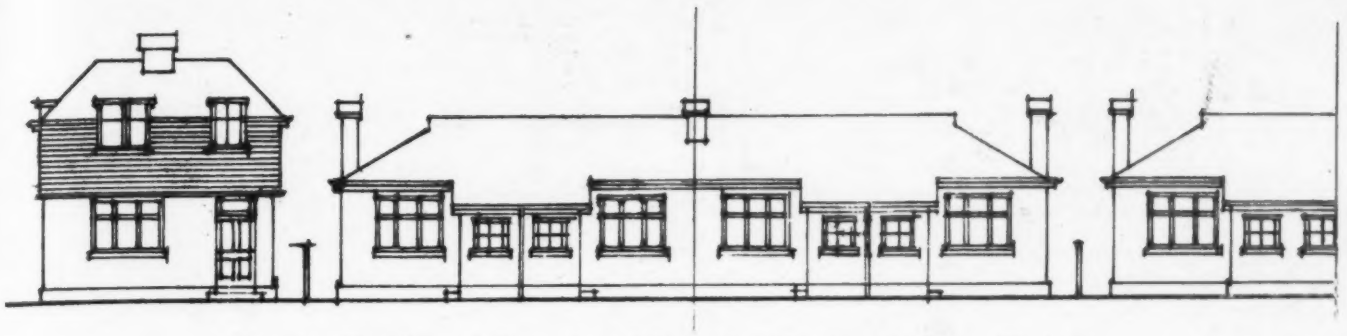


Fig. 4. Elevation of Part of a Scheme for Housing Munitions Workers.

overtime that should be worked. Saturdays should be early days, and no Sunday work should be executed.

Occasional Sundays are, however, most valuable and will not interfere with the output during the ensuing week. Penalties and bonuses require careful handling. It must be borne in mind that the users cannot move into the structure unless they have received due notice and have been able to make preparations. If, therefore, the building is unexpectedly finished four or five days before it is due and the contractor receives a large bonus, it is quite possible that it will remain unoccupied for a large portion of the time so gained.

A reasonably short time should therefore be fixed and the contractor bound to his date, the architect doing everything in his power to assist. No bonus should be offered and no penalty enforced. There are, however, certain cases in which this rule will not produce the desired result, and a bonus must then be offered.

THE ALBION MOTOR-CAR COMPANY'S NEW WORKS, SCOTSTOUN, GLASGOW.

THE two buildings recently erected at Scotstoun, Glasgow, for Messrs. Albion Motor-Car Company, Ltd., afford good examples of workshops and stores built in reinforced concrete.

The first block was built in 1913, and is about 200 ft. long, 60 ft. wide, and 60 ft. high. The first and second floors are used as stores, and were designed to carry a load of 3 cwt. per square foot. The third floor is used as a machine shop, and its construction is therefore lighter than that of those below. Access is obtained to an adjoining building on the first floor by means of a small reinforced concrete bridge, 40 ft. long and 10 ft. wide, which spans a covered roadway.

The second and newer building is 60 ft. away from the older one, the intervening space being roofed over to form a one-story building. Both concrete buildings are of the same over-all dimensions, but the construction of No. 1 is somewhat different from that of No. 2, the details of which are described in this article, as all the floors of No. 2 are devoted to workshops. Longitudinally the building is divided into ten bays by main columns about 20 ft. apart, and transversely into three bays of the same dimension. The site being near the River Clyde, it was found necessary to carry the foundations of the columns down to a depth of from 6 ft. to 8 ft. below the ground-floor level in order to reach a stratum of boulder clay which was estimated to withstand a pressure of 3 tons per square foot.

The cantilever beam foundation was adopted to avoid cutting through an existing concrete slab foundation of a brick wall, and also to prevent any extra load coming upon it. The wall being properly shored up, sheet piling was driven close to the existing foundation for a length somewhat longer than the new base, which is of oblong shape, to prevent the earth from falling away and letting the wall down when excavations were being made. After the base was cast a reinforced concrete cantilever beam was constructed, one end projecting 2 ft. 6 in. over the existing foundation to receive a column and the other end being tied down to a side column.

In another instance, where a concrete column happened to coincide with a steel stanchion of an existing building, two bases were formed 5 ft. from either side of column, columns were then brought up from them sufficiently high to clear the foundation of the stanchion, and a reinforced concrete beam 4 ft. deep and 20 in. wide was placed across, from which the new column is supported.

All the external columns are 18 in. wide on the face and 20 in. deep at the bottom, diminishing to 12 in. at the top, and are reinforced with Kahn rib bars and $\frac{3}{16}$ in. diameter binders.

The internal columns are of octagonal section, varying from 21 in. at the bottom to 10 in. at the top, and are reinforced with spirals and Kahn rib bars. The first, second, and third floors were designed to carry a superimposed load of 200 lb. per square foot, the slabs being 4 in. thick, secondary beams 18 in by 8 in. (three per bay of 20 ft.) and main beams 22 in. by 12 in.

The roof is designed to carry a load of $\frac{1}{2}$ cwt. per square foot, and the pitch is obtained by canting the beams and thickening the slabs; the latter are therefore 4 in. thick at one end and 5 in. at the other. Secondary beams are 16 in. by 6 in. (two per bay of 20 ft.) and main beams 20 in. by 9 in. The top floor is lighted from above by a glass lantern light carried on concrete trusses 10 ft. apart, the bottom ties being 16 in. by 6 in., posts 6 in. by 6 in., rafters 8 in. by 6 in., and ridge beam 14 in. by 6 in. The roof is waterproofed with asphalted felt.

Numerous holes 3 in. in diameter have been left in all the internal beams to permit cables, small pipes, and electric wiring to be drawn through and supported. These holes are below the neutral axis of the beam, and therefore do not theoretically weaken them.

The ground and first floors are used as fitting shops and are paved with granolithic. The three lines of benches that run longitudinally are served by a corresponding number of overhead runways, which are carried from the secondary beams by short lengths of angles bolted to them through holes formed of iron barrel, which were cast in with the beams.

The concrete was mixed in a mechanical mixer in the proportions of four parts of whinstone or granite chips, two parts of sand, and one of cement.

Building operations were commenced at the end of 1914, and completed about the middle of last year. The general contractors were Messrs. George Roome & Co., Ltd.

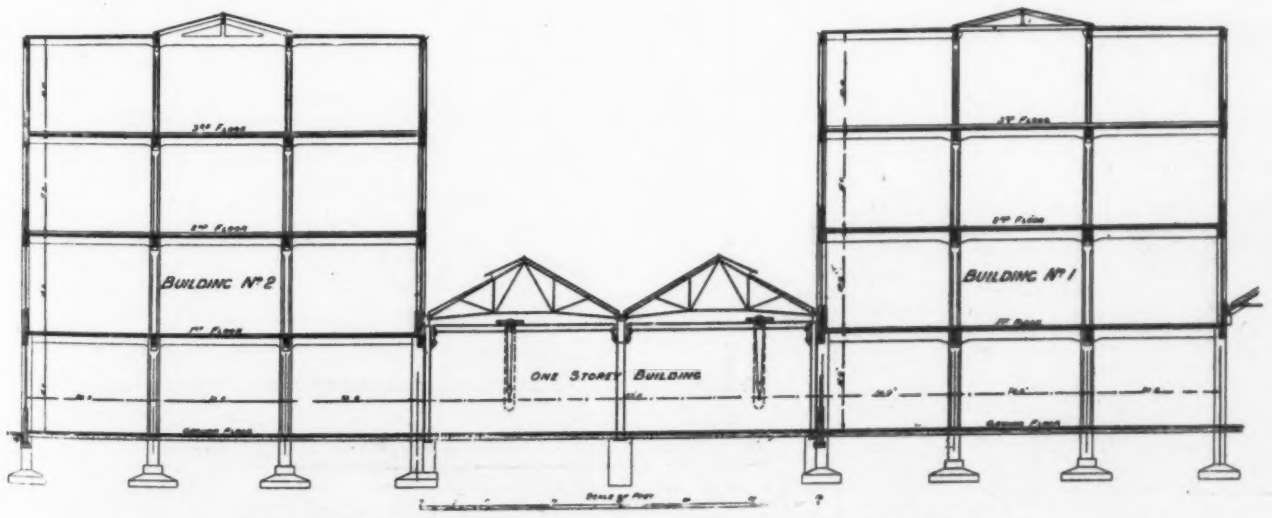
The whole of the reinforced concrete is executed on the Kahn system, and it was designed by the Trussed Concrete Steel Company, Ltd., Caxton House, Westminster.

HARRIS ACADEMY, DUNDEE.

With reference to the plans of Harris Academy, which were illustrated in our last issue, the author of the accepted design is Mr. W. B. D. Keith, not Mr. A. W. D. Keith.

SCHOOL, MENAI BRIDGE.

A new elementary school was formally opened at Menai Bridge recently. The school stands a short distance from the town on the Llanfair road, and accommodation is provided for 292 mixed and infants. The architect was Mr. Joseph Owen.



The Albion Motor-Car Company's New Works, Scotstoun, Glasgow.

The Albion Motor-Car Company's New Works, Scotstoun, Glasgow. (*See page* 145.)

STANDARDISED ALL STEEL EMERGENCY BUILDINGS.

THE war, while it has stopped many forms of building, has given an enormous impetus to others, and the makers of every form of temporary building have seen a practical proof of the old saying, "It's an ill wind which blows nobody good." Every kind of material which is used for temporary buildings has its advantages and disadvantages, and iron and steel have the great merit of being less liable to destruction and damage than lighter and more destructible materials. The Trussed Concrete Steel Company, of Central House, Kingsway, London, W.C., have devoted their attention to the perfecting of a system which is well adapted to emergency requirements, while at the same time the resulting structures are waterproof, strong, and wearable. Three men in four or five hours can put up a large hut, leaving it ready for immediate use. The units are formed of pressed steel, each 4 ft. by 7 ft. in height, and, unlike other systems, these plates are panelled so that they present a pleasing appearance and surface. The units are grooved, flanged, and slotted along their edges, so that an absolutely weathertight interlocking joint is formed with the next unit, while stability is ensured by an ingenious system of wedging, the roof trusses, of a simplified king-post form, with their braces, helping to keep the structure rigid throughout. Sheet steel forms the roof covering, the sheets being overlapped and interlocked in a way which provides watertightness.

Everything in connection with the huts except the flooring boards and posts is vermin and ant proof, and substitutes for wooden floors could be provided if required.

Skilled labour is not necessary either for erecting or pulling down the buildings, while the units can be packed in small compass, which renders them admirably suited for pioneering or campaigning purposes. Foundations are not usually needed, as sleepers are ordinarily sufficient, and if they should be wanted the roughest concrete sleeper walls would serve every purpose.

Doubtless such a system as we have described and illustrated in the photographs given provides just what is necessary in connection with the demands of war, while when the devastated regions of Europe have to be rebuilt such a system will meet special requirements of the time.

NEW GOVERNMENT CONTRACTS.

War Office.

Apparatus, Warming, Hot Water.—G. N. Haden & Sons, Lincoln House, Kingsway, W.C.

Boilers.—Beech, Hill, & Co., Ltd., Gunslane Foundry, West Bromwich; A. Kenrick & Sons, Ltd., West Bromwich; T. Sheldon & Co., Spring Vale Foundry, near Wolverhampton; J. & J. Siddons, Ltd., West Bromwich.

Bolts and Nuts, etc.—Bayliss, Jones, & Bayliss, Ltd., Wolverhampton; F. W. Cotterill, Ltd., Atlas Works, Darlaston; J. Gadd & Sons, Ltd., Blackheath, Birmingham; T. Griffiths & Co., 69, Bilston-road, Wolverhampton; Hampton & Dean, King's-hill, Wednesbury; Horton & Son, Ltd., New Alma Works, Darlaston; A. E. Jenks & Cattell, Heath Town, Wolverhampton; J. C. Prestwich, Ltd., Atherton, Manchester; J. Wiley & Sons, Ltd., Eagle Works, Darlaston; W. M. Winn & Co., Station Works, Darlaston.

Buildings, Portable.—Humphreys, Ltd., Knightsbridge, S.W.

Cement.—Associated Portland Cement Manufacturers, Ltd., Northfleet, etc.; C. & T. Earle, Ltd., Wilmington, Hull.

Cisterns (Term Contract).—F. Braby & Co., Ltd., Ida Works, Deptford, S.E.

Cranes.—Bedford Engineering Company, Houghton-road, Bedford; Butters Bros. & Co., McLellan-street, Glasgow; Holt & Willetts, Lion Works, Cradley Heath; Morrison & Mason, Ltd., H.M. Dockyard, Portsmouth; T. Smith & Sons, Rodley, near Leeds; Stothert & Pitt, Ltd., Bath.

Engines, Oil.—Blackstone & Co., 81, Cannon-street, E.C.; Crossley Bros., Ltd., Openshaw, Manchester; Petters, Ltd., 73, Queen Victoria-street, E.C.

Engines, Steam Pumping.—Merryweather & Sons, Ltd., Greenwich-road, S.E.

Ironwork, Tables, Forms, etc.—Bayliss, Jones, & Bayliss, Ltd., Wolverhampton; Birmingham Guild, Ltd., 45, Great Charles-street, Birmingham; J. Smellie, Ltd., Ivanhoe Works, Dudley; Old Hill Company, Old Hill, Staffs.

Paint.—L. Berger & Sons, Ltd., Homerton, N.E.; Brimsdown Lead Company, Ltd., Brimsdown, Middlesex; Burrell & Co., Ltd., West Ferry-road, Millwall, E.; Cornbrook Chemical Company, Ltd., Stockport; H. W. Cox & Co., Ltd., Grosvenor Works, Earl-street, Westminster, S.W.; J. S. Craig & Co., Ltd., 97, Portman-street, Glasgow; J. Foulger & Sons, Seven Stars Alley, St. George-street, E.; Golden Valley Ochre and Oxide Company, Ltd., Wick, Bristol; J. Hare & Co., Temple-gate, Bristol; T. Hill-Jones, Invicta Mills, Bow Common-lane, E.; Jenson & Nicholson, Ltd., Goswell Works, Stratford, E.; Mersey White Lead Company, Ltd., Warrington; Naylor Bros. (London), Ltd., Southall, Middlesex; Pinchin, Johnson, & Co., Ltd., Silvertown, E.; Rowe Bros. & Co., Ltd., Runcorn; Strathclyde Paint Company, Dalmarnock, Glasgow; Wilkinson, Heywood, & Clark, Ltd., Storer's Wharf, Poplar, E.

Screws and Washers.—F. Brady & Co., Glasgow; Pryke & Palmer, 40–41, Upper Thames-street, E.C.

Sheets, Corrugated, Steel.—Bowesfield Steel Company, Ltd., Stockton-on-Tees; Burnell & Co., Liverpool; W. Gilbertson & Co., Ltd., Pontardawe; J. Lysaght, Ltd., Bristol; Pontnewynydd Sheet and Galvanised Iron Company, Ltd., Pontypool, Mon.; Raven Tin Plate Company, Ltd., Glanamman; J. Summers & Sons, Ltd., Hawarden Bridge Works, Shotton, Chester; Wolverhampton Corrugated Iron Company, Ellesmere Port.

Tanks.—F. Braby & Co., Ltd., Ida Works, Deptford, S.E.; Braithwaite & Kirk, Crown Bridge Works, West Bromwich.

Taken at Twelve o'clock.

Taken at Four o'clock.

Emergency Buildings.

THE BUILDING TRADE.

THE NORTH-WESTERN FEDERATION OF BUILDING TRADES EMPLOYERS.

WE take the following from the January Report:—

Apprenticeship Question.

Arising out of the Report and resolution of the National Federation on this question, it has been decided to recommend the Local Associations to—Get into touch with the education authorities; co-opt members on the Technical Schools Committees; offer prizes to the technical school classes; pay the school fees of apprentices, and to keep an eye on the teachers' reports.

Government and Wage Increases.

The deliberations of the Government in the direction of securing national economy have led to the following statement being communicated by the Government Committee on Production to several trade unions immediately affected:—His Majesty's Government have given earnest attention to the financial position of the country, to the great and increasing demands which will still be made upon its resources to meet the needs of the war, and to the imperative need for economy in all forms of expenditure and consumption, both public and private. They have also had regard to the general advances of wages that have already been given since the beginning of the war, and to the measures already taken to tax or limit the profits of undertakings. His Majesty's Government have come to the conclusion that, in view of the pressing emergency, any further advances of wages other than advances following automatically from existing agreements should be strictly confined to the adjustment of local conditions where such adjustments are proved to be necessary. In conformity with this pronouncement the application of the joint shipyard trades for a wages advance of 15 per cent. throughout the country has been refused by the Board of Trade arbitrators.

Slacking and Bad Organisation on Government Works.

Arising out of correspondence with respect to the attracting of workmen by excess rates of wages, and having been requested to give concrete cases in support of the assertions made of slacking and bad organisation on Government works, the following have been sent up:—

Munition Works, Blaydon-on-Tyne.—Three hundred joiners employed. Materials altogether inadequate. Either too many men or defective supply of materials. Most of the men not employed to one-third their ordinary speed. Of timber supplied, a considerable part of the best (redwood) split up by labourers with picks for firewood. Labourers told off to spread ashes. On finishing and asking what next, told to re-spread them. This for over a week on small patch of ashes.

Gretna Works.—One foreman had sixteen bricklayers and seven labourers at work on one piece of work. Average laying on straightforward work 100 to 150 bricks per day. Foreman told not to mind this, but wink at it. Stated 4,000 men at work, but 1,000 properly organised would easily do what is being done.

Brockton Camp.—Evidence furnished by a practical master builder who worked there about six weeks. Arrived on job 7.10 a.m. to inquire for charge hand. Not seen till after eight o'clock. Put in a team of bricklayers along with a friend. No labourers. Told to watch how other men worked and not to work too fast. By noon had laid about twenty bricks each. Taken off by foreman, and told that these two must set up two corners in brickwork two courses high only, and not any more. Reason given for moving that mates on previous job had complained of their rushing the work. The setting up of these two corners had to occupy that afternoon and all next day. On Saturday morning these men with ten other bricklayers put to a piece of work with not more than 100 bricks in hand, and told by foreman that they had to make them last till more came. No further supplies till Monday afternoon. In the meantime these men supposed to work, Sunday included, at double time. On a sewage section there sixty-nine bricklayers worked five weeks. This man says that at home, in normal conditions, he could have done the work in same time with six men.

Ripon Camp.—Evidence given by an influential trade unionist. A plasterer and labourer working together would do about 4 sq. yds. cement floating in a day. At home would have done more than this before breakfast. Many mixings of cement wasted, because of setting before the men would exert themselves to use it.

A Camp in Wales.—Told by foreman. Eight joiners boarding in a space where four were too many to work to advantage. Typical of the general conditions. Spars wanted 12 ft. long. Men set on to cut them by hand out of 20 ft. battens. Waste of material and labour.

Camp at Winchester.—Told by joiner. Many hundreds of new horse-cloths thrown on muddy ground for horses to exercise upon. Completely ruined.

BELFAST BUILDERS' ASSOCIATION.

THE annual general meeting of this Association was held recently at 14, Arthur-street, Belfast, the President, Mr. R. B. Henry, J.P., in the chair. The Secretary, Mr. J. A. M'Auley, submitted the annual Report, which was unanimously adopted. It contained the following:—It is obvious that in the period under review no trade has been so greatly prejudiced by the war as our own, as the present is, of course, a most inopportune time for embarking on any building enterprise that can possibly be delayed. It is pleasing to record that the relationship between masters and men still continues good. There has been a great scarcity of labour during the period under review, accounted for by the departure of so many industrial workers to the war, and this had a very appreciable effect on the labour market. War bonuses at the *pro rata* rate of 3s. per week of fifty-four hours have been given to the carpenters and bricklayers, which pertains to the period ending May 1, 1916. The ground labourers and trades attendants have both received substantial increases to their wages during the year. The proposed alterations in the working hours of the various trades is at present under consideration. The membership of the Association remains unaltered.

AN ANNIVERSARY FUNCTION.

MR. EDWARD POLLARD, the well-known shop fitter, entertained a number of guests at the Holborn Restaurant on Friday, January 28, to commemorate the twenty-eighth anniversary of the day on which he started his business. Mr. Pollard, who is chairman of the company, took the chair, and read numerous telegrams of congratulation from those who have been associated with him in the firm and from other friends. In a subsequent speech he gave a brief sketch of his career from the time when he left home to look for a workshop at a rental of 10s. a week, to the present time. In the first year the average of wages paid was £15 a week, whereas in 1915 the wages bill of the firm was over £2,000 a week. He attributed his success to the help and sympathy received from the band of workers whom he had gathered together. "To work in a friendly way and to find happiness in work was the only thing worth working for, and he had found that nothing else paid so well. He believed in being on terms of good-fellowship with the humblest of the workers, and to encourage them to bring their difficulties to him, to work happily with them, and to let all share in any prosperity he had."

Mr. Barnes replied in a witty speech, in the course of which he said, "It was a wrong idea that men built businesses; they built themselves, if proprietors only gave them sufficient scope and elbow-room."

The proceedings terminated in the usual toasts, speeches, and expressions of goodwill to the firm and its directorate.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Aberdeen.—The Plans Committee of the T.C. has passed the following plans:—Alterations at Nos. 269-271, Union-street, for Messrs. Pratt & Keith, drapers, per Messrs. Kelly & Nicol, architects; picture house, Wales-street, for Mr. J. P. Kilgour, merchant, per Messrs. Sutherland & George, architects.

Athlone.—The L.G.B. has written to the R.C. intimating that they had recommended the Treasury to grant a loan of £1,300 for the provision of a new cemetery at Clonown, Athlone.

Barnoldswick.—At a recent meeting of the U.D.C. a letter was read from the C.C. with regard to the proposed joint smallpox hospital for the north-west portion of the West Riding, stating that the various authorities concerned had practically decided upon a united scheme, but the mode of apportioning the expense and cost of maintenance was still in abeyance.

Barrow.—The T.C. has passed plans for a new joiners' shop and general stores and saw mills for Messrs. Vickers; also for twenty-five houses and one house and shop in Victoria-road, for Messrs. Banks & Co.

Birmingham.—The Town-planning Committee of the Birmingham City Council has resolved to ask the City Council to sanction an application to the L.G.B. for leave to prepare an amending scheme for East Birmingham.

Bournemouth.—The B.C. has approved of the following:—Amended plan, premises, the Square, Messrs. Bobby & Co., Ltd.; additions, 402 and 404, Holdenhurst-road, the Parkstone and Bournemouth Co-operative Society; covered yard, Glenarm, Withermoor-road, Messrs. J. A. Parsons & Son; amended plan, seven houses, Green-road, Mr. A. Barnes; amended plan of house, Chessel-avenue, Messrs. J. & W. Hayward; motor and cart sheds, St. Paul's-lane, Messrs. H. Newman & Son; four maisonnettes, plots 36 and 37, Firbank-road, Messrs. J. & W. Hayward.

Bray.—The U.D.C. has approved plans submitted by Mr. M'Carthy, Surveyor, re baths.

Bridport.—The West Bay Committee has arranged for the area at the end of the esplanade to be metalled at a cost of £50.

Buckie.—The authorities for the Buckie Harbour extension scheme have been informed by the Treasury that they are willing to grant the application of the Buckie T.C. for variation of the conditions attached to the advance promised from the Development Fund and for a further loan for the completion of the harbour extension works. The additional cost sanctioned is £40,000.

California.—The House of Representatives has authorised an expenditure of $500,000 to equip

* See also our list of Competitions, Contracts, etc., on page 150.

Mare Island, California, as a naval yard for the building of Dreadnoughts.

Carlisle.—The T.C. has adopted a revised scheme for providing thirty-six houses in Denton Holme under the Housing of the Working Classes Act, estimated to cost £10,684, an increase of £2,300 on the original estimate.

Dundee.—The following plans and sections of proposed new buildings, etc., in Dundee have been lodged at the office of the City Engineer:—Clepington-road (west), shed for Messrs. P. D. Mitchell, Ltd.; Crescent-street, extension of school for Dundee School Board; Dundonald-street, warehouse for Messrs. Malcolm, Ogilvie, & Co., Ltd.; Navarre-street, Barnhill, cottage for Messrs. James Tullis & Sons.

Dunfermline.—The District Committee has approved amended plan submitted by Mr. Gilbert T. Scott, architect, Inverkeithing, on behalf of the Hill of Beath Tavern Society, Ltd.; also plans submitted by Messrs. Smith & Watt, North Queensferry, showing proposed erection of temporary office at Ferrybarns.

Finchley.—Plans passed by the D.C.:—Revised junction of Addison-way and North-way, east of Eastholm, Addison-way, Co-Partnership Tenants, Ltd.; temporary buildings—Long-lane, near junction with Squires-lane, Mr. F. Fear; 2, Leopold-road, Mr. A. W. Cattle; Crescent-road, G.N.R. goods yard, Messrs. Eastwood & Co.; rear of Grand Hall, North Finchley, Ashby's New Halls; 53, Clifton-road, Mr. M. Groom; "The Laurels," High-road, North Finchley, De Dion Bouton, Ltd.; 22, Woodberry-grove, Mr. R. Ellwood.

Glasgow.—The following linings have been recently granted at Glasgow Dean of Guild Court:—Messrs. A. L. Meteorlite, Ltd., 106, Victoria-street, London, to erect a workshop at North Craigpark-street and Alexandra-parade; the Caledonian Railway Company to convert existing booking office into a dwelling-house at Crow-road Station, Clarence-drive; Messrs. William Beardmore & Co., Ltd., to erect dining-rooms at Old Edinburgh-road; Messrs. Mechans, Ltd., Scotstoun Ironworks, Scotstoun, to erect a shed at their works in South-street and Balmoral-street.

Haynes.—The Beds. C.C. has accepted a tender for repairs to cottages, fences, gates, etc., at Haynes, for £44 15s. 6d.

Holmfirth.—The Council's Surveyor has received a plan of proposed new buildings at Kirkroyds, for Messrs. J. Holmes & Son.

Horbury.—The D.C. has approved plans of additional storage sheds at Horbury Bridge, for Messrs. J. Reid & Son, oil works; motor shed at Calder-grove, for Messrs. C. Marsden & Son, paper works; and of an electrical sub-station at Horbury Bridge, for Messrs. Elwand Smith & Co., mungo manufacturers.

India.—The scheme submitted by the Commissioners of the Howrah Municipality for providing drainage to a portion of that municipality has been approved by the Governor-in-Council.

London.—An application made, with plans, for the consent of the justices for the licensee of The Fountain, Mile End-road, to be allowed to carry out certain alterations has been granted. Application to alter the beerhouse, 79, Kirbey-street, Bromley, has been acceded to by the licensing justices.

Loughborough.—The T.C. has passed the following plans:—Coalhouse and stores, Knightthorpe-road, for the Primitive Methodist trustees; yarn shed, Rendell-street, for Messrs. H. E. Godkin & Co., Ltd.

Luton.—The T.C. has approved the following plans:—Four houses, Cavendish-road, Mr. F. Thomas; warehouse, Bury Park-road, Mr. W. J. Bolton; additions, Biscot-road, Commercial Cars, Ltd.

Lydney.—Plans for alterations of a villa at Woolaston, for Mrs. Ann Hawkins, have been approved by the R.D.C.

Macduff.—At a recent meeting of the T.C. a plan for a new motor garage, for Mr. J. T. Wilson, Manner-street, was remitted to the Plans Committee.

Madras.—Plans are ready for the construction of the new aquarium on the Marina on the site now occupied by the Lady Wenlock Park, Madras.

Marsden.—The New Buildings Committee of the U.D.C. has referred the plan submitted by Mr. Albert Schofield showing proposed conversion of stables into cottages to the Finance and General Purposes Committee.

Musselburgh.—Plans have been passed by Musselburgh Dean of Guild Court for the erection of a picture house immediately adjoining the Musselburgh United Free High Church to accommodate 1,054 persons. The promoters are the Central Picture House, Musselburgh, Company, Ltd., 104, West George-street, Glasgow.

Oldbury.—The U.D.C. has passed the following building plan:—Messrs. Shotton Bros., offices, Manchester-street.

Penzance.—The T.C. has accepted a tender for the building of the wall and making-up the new road, etc., to the new houses in connection with the housing scheme, at £167 11s. 6d.

Richmond (Yorks).—The T.C. has passed plans for the proposed lavatory in the Friary Grounds, and has given authority to the Executive Committee to carry out the work.

Shanklin.—The U.D.C. has approved a plan of alterations of a shop front in Shaftesbury-buildings, for Mr. R. Warder.

Sheffield.—An application is to be made by the Sheffield City Council for authority to prepare a "town plan" in respect of 142 acres of land comprising the area between the Eccleshall end of Psalter-lane, Nether Edge, and Brincliffe.

Silsden.—The U.D.C. has approved the plan of Mr. T. Green's sheep dipping shed at Brunthwaite; also the plan of the Silsden Dyeing Company for petrol store.

Skelmanthorpe.—The D.C. has passed plans submitted by the executors of the late Mr. John Senior for the conversion of a shop into a dwelling-house; also plans of a washhouse submitted by Mr. Outram in Spencer-street.

Spain.—Royal Assent has been given to the proposals of the "Dirección General de Obras Públicas" for the distribution of the sum of 9,000,000 pesetas (about £360,000) among the various provincial authorities in Spain, with a view to carrying out, by contract, necessary road improvement works during the current year.

Stafford.—On the recommendation of the Electricity Committee, the T.C. has agreed to make application to the L.G.B. for their sanction to the raising of £12,000 for extensions to the electricity works.

Stokesley.—The R.D.C. has approved of a plan from Mr. M. Dodds of two dwelling-houses proposed to be built in Kirby-lane, Great Broughton.

Sutton-in-Ashfield.—At a recent meeting of the U.D.C. the following plan was recommended to be passed:—Stable, washhouse, etc., in Fox-street, for Mr. Arthur Searson.

Swindon.—The following plans have been approved by the T.C.:—Messrs. F. & T. Affleck, lavatories, Prospect Works; Messrs. Bridgman & Bridgman, reconstruction of premises for Messrs. Lennards, Ltd., 80, Regent-street; Mr. A. Mortimer, rebuilding and extending shed, Raynard-grove; Messrs. Green & Marsh, brick shed, rear of 21, Commercial-road.

Teesdale.—The L.G.B. has approved the proposal of the Guardians to allow a strip of the Workhouse ground to be given to the U.C. of Barnard Castle for the widening of the road.

Watford.—Plans approved by the U.D.C.:—For alteration to Derby House, High-street; for three houses in Sussex-road, for Mr. Weller; new store for Messrs. W. & D. Wilkins, attached to proposed fish shop, Queen's-avenue.

West Lancashire.—Plans of proposed sewage purification works, Bartlett Home for Epileptics, Maghull, and of proposed workshop, Guide-road, Hesketh Bank, for Mr. George Dawson, have been approved by the Council.

Weston-super-Mare.—The Burial Board Committee of the U.D.C. has considered the proposals of the Surveyor for laying out the lands acquired for burial purposes, and have instructed him to proceed with the preparation of the plans accordingly.

GENERAL BUILDING NEWS

NEW WORKMEN'S DWELLINGS, LIMPSFIELD.

The Godstone Rural District Council have completed their scheme for the provision of workmen's cottages at Limpsfield. The cottages are built in three blocks in crescent form, the central block of four standing back about 80 ft. from Redlands-lane, and two wing blocks of three each at either side. The walls and chimneys are of local brick, externally plastered above the plinth. The cottages are roofed with plain tiles, the outbuildings being covered with "Ruberoid." Each cottage contains—On the first floor, bedroom 13 ft. 9 in. by 10 ft., a second room 10 ft. by 9 ft., third room 7 ft. 8 in. by 7 ft. 3 in. On the ground floor, living-room 13 ft. 9 in. by 12 ft., scullery 13 ft. 9 in. by 7 ft., larder, coal cellar, water-closet, and covered shed 10 ft. by 5 ft. The cottages were erected from the designs of Mr. T. C. Barralet, M.R.S.I., Surveyor to the Council. Mr. A. Brasier, of Limpsfield, was contractor for the buildings, and Mr. G. Morgan, of Oxted, for the drainage works. The cost of the former is about £1,900, and the latter about £200.

TRADE NEWS.

Boyle's latest patent "Air-pump" ventilators have been adopted for the Cinema at Tidworth.

The additions to Messrs. Ferranti's Engineering Works, Hollinwood, are being ventilated by means of Shorland's exhaust roof ventilators, supplied by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

Messrs. Harry Hems & Sons, ecclesiastical art works, Exeter, in announcing the death of the head of the firm, the late Harry Hems, state that the business will continue to be carried on by his sons, who for many years have been associated with their father in his work.

The balconies at the new Chelsea Hospital for Women have been constructed with Pudlocd cement concrete.

WAGES IN THE BUILDING TRADE.

London.—The London Master Builders' Association has received communications from the Operatives' Societies with regard to wages and conditions in this district. In each case notice is given to terminate the working rules in six months from the date of such notice, and the following alterations are proposed:—Bricklayers (14–1–16). Rule 2—Add "Where possible one hour for dinner, and leave off 5 p.m." Rule 3—Delete 11½d. per hour and insert 1s. 1½d. per hour. Rule 4—Delete "at request of the employer" and insert "until

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recognised starting time next day." *Re* Night Gangs—Delete "From Saturday midnight to Sunday midnight, double time," and insert "From Saturday, 4 p.m., to starting time on the following Monday shall be treated as Sunday work." Rule 13—Delete the rule. Rule 14—Delete the rule. Wood Cutting Machinists (15–1–16). Rule 3 be rescinded, and the following inserted in its place: "Minimum rates of wages shall be paid as per grade—Elephant, spindle, four-cutter, and other moulding machines, 1s. 1d. per hour. Tenoning machines, 1s. 0½d. per hour. Planing and other machines not here specified, 1s. per hour. Circular and frame saws, 11½d. per hour. Saw-sharpening and tool-making, 1s. 1d. per hour. Marking and cutting-out, 1s. 0½d. per hour." Smiths and Fitters (15–1–16). Rule 3—To read, "That the rate of wages for smiths and fitters in the London district shall be 1s. per hour." Labourers' Societies (15–1–16). Rule 3—To read, "That the rate of wages for all labourers, except apprentices and improvers, engaged on building works to be 10d. per hour; scaffolders and timbermen, 10½d. per hour." Stonemasons (17–1–16). Rule 3—Delete the present rule and insert, "The standard rate of wages to be 1s. 1½d. per hour for banker masons and machinists; masons fixing and granite masons, 1s. 2½d. per hour." Rule 4—Delete the words, "Overtime when worked at the request of the employer" and insert "That no overtime be worked except in cases of necessity, and when this is likely to continue more than two consecutive nights, the firm affected to communicate with the District Secretary explaining the reason, and his consent or otherwise to be final." Overtime when worked shall be paid, etc., and add, "Double time shall be paid for *ante* time during both winter and summer months." Rule 5—Delete the word "at" and insert "by" after the words, "All tools to be sharpened." Rule 6—Delete the words "1s. 6d. per working day" and insert "2s. 6d. the first day, 5s. for two days, 7s. 6d. for three days, with a maximum of 12s. per week." Rule 8—Add "That on all jobs provision be made for fixers and fitters, so that in case of inclement weather no stoppage of work shall take place." That proper shop accommodation be provided for all banker masons, and where such shops are not provided and time is lost by masons through inclement weather, the employer to pay half wages for such lost time. No shop to be less than 12 ft. in height and a minimum space of 4 ft. between bankers. Rule 13—Delete the whole of present rule. Rule 14—Delete the whole of present rule and insert new one as follows: "Should any dispute arise in connection with these rules, the same shall be dealt with in accordance with the scheme of the National Conciliation Board for the Building Trades." New rule—"Worked stone not to come into the area over which these rules operate from any district where the standard rate of wages is below the current rate paid in this area, except plain York steps or templates." New rule—"No piecework or sub-contracting for labour only shall be allowed under these rules." Plasterers (17–1–16). Rule 3—The Secretary writes, "I am instructed by my Committee to give the London Master Builders six months' notice to date from January 17, 1916, for an advance of wages of twopence per hour for the London Plasterers." Carpenters and Joiners' Societies (29–1–16). Rule 3—That the minimum rate of wages shall be 1s. 1d. per hour. Rule 4—That the words, "When worked at the request of the employer" after the first word "overtime" be deleted. After the words "Double time" be inserted "until the recognised starting time next morning." After the words "Christmas Day" be inserted "and all Bank Holidays." That 2d. extra per hour be paid for night work, instead of the 1d. extra as at present. Rule 5—That "42" be deleted and insert "36." Rule 6—Country money, that "1s. 6d." be deleted, and insert "2s. 6d." Rules 13, 15, and 16 be deleted. A demand for an immediate increase in wages presented in April, 1915, was refused. The present request is made in a more constitutional manner, inasmuch as the notice for alterations is given in accordance with the Working Rule Agreements.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9½	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7	7
Ashton-under-Lyne	10½	10½	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9	8½	7½	7½	7½
Barrow-in-Furness.	9½	10	9½	9½	9½	9½	9½	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	ut	7	7	7
Birmingham	11½	11½	11½	11½	10½	11½	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9½	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6½	6½	6½
Bradford	10	10	9½	9½	10	10	8½	7	7	7
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9½	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8½	6½	6½	6½
Bury	10½	10½	10	9	9½	10	9	6	7	7
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8½	8½	8½	8½	—	8½	8½	6	6	6
Chester	9½	10	10	9½	9½	9½	8½	6½	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10½	10½	10½	10½	9½	10½	9½	7½	7½	7½
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9	9	9	8	6½	6½	7
Dudley	8½	8½	8½	8½	8½	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5½	5½	5½
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	7
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	8½	8½	9	8½	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10½	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7½	8½	8	7	7	5½	5½	5½
Huddersfield	10	10	9½	9½	10	9	8½	7½	7½	7½
Hull	10½	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10½	10½	10½	10	10	10	8½	7½	7½	7½
Leicester	10½	10	10½	10½	11	10	9	7½	7½	8
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10½	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10	9½	7½	7½	7½
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	10½	10½	10½	10½	9½	10	9	8	8	8½
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½*
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½
Portsmouth	9½	9½	9½	9½	—	8½	7½	7	7	7
Preston	10½	10½	10	9½	9½	10	9½	6	7	7½
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8½	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9½	9½	9½	9½	8	9½	8½	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9½	10	9½	9½	9½	9½	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	9½	10½	9½	10	10	9	7½	7½	7½
Shrewsbury	8½	8½	8½	9½	—	8½	7	5½	5½	5½
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7½	7½	7½
Stockport	11	10½	10	10½	9½	10	9½	6½	7	7½
Stockton-on-Tees	10	10½	10½	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9½	9	9	—	8½	8½	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7½	7½	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6½	6½	6½
Warrington	8½	10½	10½	10½	8½	10½	9½	6½	6½	6½
West Bromwich	10	10	10	10½	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9½	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6½
Worcester	8½	9	9	9	9	9	7½	6	6	6
York	9†	9†	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.
* War bonus of 2s. per week granted.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this number: Competitions, —; Contracts, iv., vi., viii.; Public Appointments, xviii.; Auction Sales, xx. Certain conditfons beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

FEBRUARY 19.—**Seascale.**—HOUSE.—For the brick and mason work, slating, and plastering and plumbering work in the erection of a house at Seascale. Plans, etc., of Mr. James Tyson, The Glen, Seascale.

FEBRUARY 21.—**Whitley Bay.**—PAINTING, ETC.—Painting and decorating the interior of the Council Offices and caretaker's house, Council-buildings, Whitley Bay, for the Whitley and Monkseaton U.D.C. Specification, etc., of Mr. A. J. Rousell, A.M.Inst.C.E., Council's Surveyor, Council Offices, Whitley Bay.

FEBRUARY 24.—**Salford.**—ALTERATIONS.—For alterations to Gas Meter Testing Office. Particulars from Borough Engineer, Town Hall, Salford.

FEBRUARY 26.—**Abertillery.**—FLOORING.—For new flooring at the Powell's Tillery Institute, Abertillery, for the Trustees and Committee. Particulars from Mr. F. R. Bates, architect, 30, Commercial-street, Newport.

FEBRUARY 28.—**Beverley.**—HOUSE AND COTTAGES.—For the erection of new foreman's house and two cottages at High Eske Farm, near Beverley. Plans, etc., of Mr. R. H. Whiteing, architect, No. 3, Ladygate, Beverley.

* MARCH 2.—**Cardiff.**—ALTERATIONS AND ADDITIONS.—Tenders are invited for alterations and additions to Messrs. Cory Brothers & Co.'s premises.

FURNITURE, MATERIALS, etc.

FEBRUARY 19.—**Burton-upon-Trent.**—GRANITE, ETC.—Supply to the B.C. of the undermentioned materials for six or twelve months from March 31, 1916:—Broken granite, granite setts and kerb, lime, stoneware pipes, bricks, cement, etc. Forms of tender of Mr. George T. Lynam, Borough Engineer and Surveyor, Town Hall.

FEBRUARY 19.—**Rathmines.**—MATERIALS.—Supply to the Rathmines and Rathgar U.D.C. of builders' materials for the year ended March 31, 1917. Tender forms can be obtained at the Surveyor's Office.

FEBRUARY 21.—**Antrim.**—MATERIALS.—Supply to the Asylum Committee of plumbing materials, paints and oils, timber. Tender forms from the Clerk of the Asylum, Holywell, Antrim.

FEBRUARY 22.—**Hoylake.**—MATERIALS.—Supply to the U.D.C. of Hoylake and West Kirby of builders' materials for the year ending March 31, 1917. Specifications, etc., of the Engineer and Surveyor to the Council, Town Hall, Hoylake.

FEBRUARY 22.—**London.**—PAINTERS' COLOURS, ETC.—Supply to the Metropolitan Asylums Board of painters' colours, oils, etc. Forms of tender can be obtained at the Office of the Board, Embankment, London, E.C.

FEBRUARY 23.—**Bury.**—MATERIALS.—Supply to the Gas Committee of builders' materials for the period April 1, 1916, to March 31, 1917. Forms of tender, etc., can be obtained at the Gas Works, Elton, Bury.

FEBRUARY 23.—**London.**—MATERIALS.—Supply to the Council of the Borough of St. Marylebone of builders' materials for six months from April 1, 1916. Tender forms, etc., may be obtained on application at 19-20, York-place, Baker-street, W.

FEBRUARY 24.—**Dorchester.**—MATERIALS.—Supply to the T.C. of builders' materials. Form of tender, etc., of the Borough Engineer, 21, North-square.

FEBRUARY 28.—**Dundee.**—MATERIALS.—Supply to the Tramway Committee of the Corporation of builders' materials for one year from May 16, 1916. Specification, etc., of Mr. Peter Fisher, General Manager, Tramway Office, Dundee.

FEBRUARY 28.—**Ealing.**—MATERIALS.—Supply to the T.C. of builders' materials. Forms of tender, etc., of the Borough Surveyor, Mr. W. R. Hicks, A.M.Inst.C.E., Town Hall, Ealing, W.

FEBRUARY 28.—**Gravesend.**—BUILDERS' MATERIALS.—Supply to the T.C. of builders' materials for one year from April 1 next. Conditions of tendering, etc., at the office of the Borough Treasurer, 4, Woodville-terrace.

FEBRUARY 28.—**Maesteg.**—MATERIALS.—Supply to the U.D.C. of builders' materials for six months. Conditions of contract, etc., of Mr. Samuel J. Harpur, the Surveyor to the Council, Council Offices, Talbot-street, Maesteg.

FEBRUARY 28.—**Spenborough.**—GRANITE, ETC.—Supply to the U.D.C. for the year ending March 31, 1917, of granite and tarred slag, cement, stoneware pipes, kerbs and setts, tar, pitch, and oil. Forms of tender, etc., of Mr. John H. Linfield, Clerk to the Council, Town Hall, Cleckheaton.

FEBRUARY 28.—**Whitefield.**—GRANITE, ETC.—Supply to the U.D.C. of granite macadam, setts, chippings, kerbs, flags, earthenware pipes, iron-work, etc., during the year endng March 31, 1917. Forms of tender, etc., of Mr. George M. Denton, Engineer and Surveyor, Council Offices, Whitefield.

FEBRUARY 29.—**Woodford.**—GRANITE, ETC.—Supply to the U.D.C. for the year ending March 31, 1917, of broken granite, limestone chippings, tar, pitch, and creosote oil, gravel, hoggin, and sand. Forms of tender of Mr. William Farrington, Surveyor to the Council, Council Offices, Woodford Green.

MARCH 1.—**Droylsden.**—CHIPPINGS, ETC.—Supply to the U.D.C. for the period ending March 31, 1917, of chippings, pitch, cement, brickwork for graves, lime. Forms of tender, etc., on application at the Council Offices, Droylsden.

MARCH 2.—**Bedwas (Mon.).**—MATERIALS.—Supply to the Directors of the Bedwas Navigation Colliery Company, Ltd., of builders' materials during twelve months from April 1, 1916. Contract forms of Mr. Griffith Morgan, Secretary, Registered Office, Bedwas Navigation Colliery Company, Ltd., Bedwas, Mon.

MARCH 2.—**Bolton.**—MATERIALS.—Supply to the Electricity Committee of the Corporation of builders' materials for the year ending March 31, 1917. Specifications, etc., of Mr. W. J. H. Wood, Borough Electrical Engineer, Back o' th' Bank, Bolton.

* MARCH 7.—**London.**—MATERIALS, ETC.—The Metropolitan Water Board invite tenders for supply of various stores and execution of work for a period of one year.

ENGINEERING, IRON, AND STEEL.

FEBRUARY 28.—**Coventry.**—CAST-IRON PIPES, ETC.—Supply to the Waterworks and Fire Brigade Committee of the Corporation of cast-iron pipes, lead pipes, solder, hydrant and valve boxes, etc., for the year ending March 31, 1917. Forms of tender, etc., of Mr. J. E. Swindlehurst, Water Engineer, St. Mary's Hall.

FEBRUARY 29.—**London.**—DRIVING WHEEL TYRES, ETC.—Supply to the London County Council of forge steel driving wheel tyres and forged steel trailing wheel tyres. Form of tender, etc., from the Chief Officer, London County Council Tramways, 62, Finsbury-pavement, E.C.

ROAD, SANITARY, AND WATER WORKS.

FEBRUARY 19.—**Bedford.**—BROKEN GRANITE, ETC.—Supply to the Bedfordshire C.C. of broken granite, slag, flints, gravel, and for the cartage of road materials. Forms of tender, etc., of the County Surveyor, Shire Hall, Bedford.

FEBRUARY 19.—**Marshland.**—GRANITE.—Supply to the R.D.C. of granite. Forms of tender of Mr. R. W. Faircloth, Clerk to the Council, 2, Ely-place, Wisbech.

FEBRUARY 19.—**Southborough.**—BASALT, ETC.—Supply to the U.D.C. of about 700 tons of basalt, granite, or other suitable stone, to be broken not to exceed 1½-in. gauge. Forms of tender, etc., of Mr. Philip Hanmer, Clerk to Council, Council Offices, Southborough.

FEBRUARY 22.—**Salford.**—SEWERING, ETC.—For sewering and flagging works. Particulars from Borough Engineer, Town Hall, Salford.

FEBRUARY 23.—**East Stow.**—SEWER, ETC.—For 700 ft. extension of 9-in. sewer, together with manholes, ventilating shaft, etc., in the parish of Stowupland, for the East Stow R.D.C. Plans, etc., of Mr. Henry E. Wilkes, Clerk to Council, Market-place, Stowmarket.

FEBRUARY 23.—**Hull.**—SEWERING, ETC.—For sewering, draining, levelling, paving, and curbing in the back road behind Nos. 111 to 115, Prince's-avenue, and the back road behind Nos. 501 to 507, Anlaby-road, for the Corporation. Forms of tender, etc., of Mr. F. W. Bricknell, City Engineer, Guildhall, Hull.

FEBRUARY 26.—**Church (Lancs.).**—LIMESTONE CHIPPINGS, ETC.—Supply to the U.D.C. of the following materials for the year ending March 31, 1917:—Limestone chippings, lonkey setts, and coke; also for tar spraying a portion of Dill Hall-lane, area about 8,000 sq. yds. Forms of tender, etc., of Mr. Fred Howarth, A.M.Inst.C.E., Surveyor, Church.

FEBRUARY 26.—**Middleton.**—MACADAM, ETC.—Supply to the Corporation of macadam, flag rocks, setts, curbs, flags, cement, pipes, etc., for the year ended March 31, 1917. Mr. Frederick Entwistle, Town Clerk, Town Hall, Middleton.

FEBRUARY 26.—**Wisbech.**—GRANITE, ETC.—Supply to the R.D.C. of granite, ironstone, slag, gravel, and ragstone. Forms of tender of the Highway Surveyor for the North District, Mr. A. G. Catling, 4, Post Office-lane, Wisbech.

FEBRUARY 28.—**Blyth.**—BROKEN SLAG.—Supply to the Blyth and Cuckney R.D.C. of best broken slag for roads. Forms of tender, etc., of Mr. Frederick Hopkinson, Surveyor, 81, Bridge-street, Worksop.

FEBRUARY 28.—**Castle Ward.**—ROAD MATERIALS.—For supplying, quarrying, breaking, leading, and laying-on materials required for the several highways in the district from April 1, 1916, to March 31, 1917; also for supplying broken whinstone, for the R.D.C. Forms of tender, etc., from the Surveyor, Mr. David Hope, Ponteland.

FEBRUARY 28.—**Coventry.**—ROAD STONE, ETC.—Supply to the Corporation of the following materials during the year ending March 31, 1917:—Broken road stone, broken slag, granite kerbs, granite setts, stoneware pipes, castings, workmen's tools. Form of tender, etc., of Mr. J. E. Swindlehurst, City Engineer and Surveyor, Saint Mary's Hall.

FEBRUARY 28.—**Hastings.**—TAR.—Supply to the Corporation of 70,000 gallons of refined or distilled coal tar or tar compounds for surface treatment of roads. Tender of Mr. P. H. Palmer, M.Inst.C.E., Borough Engineer, Town Hall, Hastings.

FEBRUARY 28.—**Penarth.**—LIMESTONE, ETC.—Supply to the U.D.C. of mountain limestone, road metalling, and gravel, and basalt or granite gravel, up to March 31, 1917. Forms of tender, etc., of Mr. Edgar I. Evans, A.M.Inst.C.E., Surveyor, District Council Offices.

* MARCH 6.—**Kensington.**—SEWERS CONSTRUCTION.—The Royal Borough of Kensington invite tenders for construction of certain sewers within the Borough.

NO DATE.—**Gainsborough.**—ROAD METAL.—Supply to the R.D.C. of about 7,000 tons of whinstone and about 600 tons of slag. Specifications, etc., of Mr. Richard Maxwell, Surveyor, Lea-road, Gainsborough.

NO DATE.—**Yeadon.**—ROAD MATERIALS.—Supply to the U.D.C. of road materials for the period ending March 31, 1917. Forms of tender of Mr. N. Houlden, Surveyor to the Council, Town Hall, Yeadon.

Public Appointment.

* FEBRUARY 29.—ASSISTANT INSTRUCTOR HANDICRAFT.—The L.C.C. invite applications for the above temporary post.

Auction Sales.

* FEBRUARY 29.—**Hammersmith.**—Mr. H. W. Smith will sell by auction, on the premises, the stock, plant, and machinery of a builder, contractor, and saw mill proprietor.

* FEBRUARY 29.—**Sutton.**—Messrs. Morgan, Baines, & Clark will sell by auction, on the premises, a quantity of old building material.

* FEBRUARY 29.—**Upper Norwood.**—Messrs. Wootton & Son will sell by auction, on the premises, a quantity of ironmongery, etc.

[Those with an asterisk (*) are advertised in this issue]

PRICES CURRENT OF MATERIALS.

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.]

Since our last issue sheet lead and white and red lead have been increased, and several other prices altered.—ED.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£ s. d.
Best Stocks	2 0 0
Picked Stocks for Facings	2 12 0

Per 1000, Delivered at Railway Depôt, London.

	£ s. d.		£ s. d.
Flettons	1 10 0	Best Blue Pressed Staffordshire	4 14 0
Best Fareham Red	3 12 0	Do. Bullnose	4 18 6
Best Red Pressed Ruabon Facing	5 5 0	Best Stourbridge Fire Bricks	4 14 0
GLAZED BRICKS—		D'ble Str'tch'rs	17 17 6
Best White, Ivory, and Salt Glazed Stretchers	12 7 6	Double Headers	14 17 6
Headers	11 17 6	One Side and two Ends	18 17 6
Quoins, Bullnose and 4½ in. Flats	15 17 6	Two Sides and one End	19 17 6
		Splays and Squints	17 7 6

Second Quality £1 per 1000 less than best.

	£ s. d.	
Thames Ballast	7 9	per yard, delivered.
Thames and Pit Sand	8 0	" " "
Best Washed Sand	9 0	" " "

Per ton, delivered.

	£ s. d.		£ s. d.
Best Portland Cement	2 5 0	..	2 8 0

Do. £2 1s. alongside in 80-ton lots.
Ferrocrete 2s. 6d. per ton extra on above.
Best Ground Blue Lias Lime.... 1 3 6 at rly. depôt.
NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.
Grey Stone Lime ..... 17s. 0d. per yard delivered.
Stourbridge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s. d.
BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	1 7
Do. do. delivered in Railway trucks at Nine Elms, L. & S.W.R., per ft. cube	1 8½
Do. do. delivered on road waggons, Nine Elms Depôt	1 9½
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, or L. & S.W., per ft. cube	2 5½
Lo. do. delivered on road waggons at Pimlico Wharf or Nine Elms Depôt, per ft. cube	2 6½
White Basebed, 2d. per ft. cube extra.	

RANDOM BLOCKS—Per Ft. Cube, delivered at Rly. Depôt.

	s. d.		s. d.
Ancaster in blocks	2 0	Closeburn Red Freestone	2 2
Beer in blocks	1 7½	Red and White Mansfield Random block	2 9
Grinshill in blocks	2 4	Yellow Magnesian Limestone do. do.	3 3
Darley Dale in blocks	2 5		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
Scappled random blocks	3 4
Per Ft. Super., Delivered at Railway Depôt.	
6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 5
6 in. rubbed two sides ditto, ditto	2 8
3 in. sawn two sides slabs (random sizes)	1 0½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 8½
1½ in. to 2 in. ditto, ditto	0 6½

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.	
Scappled random blocks	3 0
Per Ft. Super., Delivered at Railway Depôt.	
6 in. sawn two sides landing to sizes (under 40 ft. super.)	2 3
6 in. rubbed two sides ditto	2 7
3 in. sawn two sides slabs (random sizes)	1 0
2 in. self-faced random flags	0 5

TILES.

	Per 1000 f.o.r. London. £ s. d.
Best machine-made tiles or hand-made sand-faced tiles from either Broseley or Staffordshire district	2 12 6
Ornamental ditto	2 15 0
Hip and valley tiles (per dozen)	0 5 6

SLATES.

	Per 1000 of 1200 f.o.r. London. £ s. d.
Best Blue Bangor slates, 20 by 10	11 16 0
First quality " "	11 10 0
" " 16 by 8	5 15 0
Best Blue Portmadoc, 20 by 10	11 13 6
First quality " "	11 3 6
" " 16 by 8	5 15 0

WOOD.

BEST BUILDING REDWOOD.

Imported sizes.

	Per standard. £ s. d.		£ s. d.
Deals: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in.	28 10 0	..	29 10 0
3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	27 10 0	..	28 10 0

WOOD (*Continued*).

BEST BUILDING REDWOOD.	Per standard. £ s. d.		£ s. d.
Battens: 2 in., 2½ in., and 3 in. by 8 in. ; 2 in., 2½ in., and 3 in. by 7 in. ; 2 in., 2½ in., and 3 in. by 6 in. ; 2 in., 2½ in., and 3 in. by 5 in.	23 10 0	..	24 10 0
Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. ; 3 in. by 4 in., and 3 in. by 4½ in.			
Boards: 1 in., 1½ in., and 1½ in. by 6 in. and 7 in.	0 10 0	}	more than
¾ in.	1 0 0	}	battens.
Seconds: building quality deals, battens, boards, and scantlings	1 0 0		less than best.
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	Per load of 50 ft. cube. 8 10 0	..	—
Seconds do. do.	8 0 0	..	—
9 in. to 10 in. do.	7 0 0	..	—
6 in. to 8 in. do.	6 10 0	..	—
Stocks very limited.			
Sawn pitch pine logs (about 35 cu. ft. average)	Per load. 10 0 0	..	11 0 0
Do. 6 in. to 10 in.	8 0 0	..	9 0 0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6 10 0	..	7 0 0
	Per standard.		
Best Pitch Pine Deals	34 0 0	..	35 0 0
Rio do.	23 0 0	..	25 0 0
Under 2 in. thick	0 10 0		extra.

JOINERS' WOOD.

White Sea First Quality Red: 4 in. by 11 in.	35 0 0	..	36 0 0
3 in. by 11 in., and 2 in. by 11 in.	34 0 0	..	35 0 0
4 in. by 9 in.	33 0 0	..	34 0 0
3 in. by 9 in., and 2½ in. by 9 in.	32 0 0	..	33 0 0
9 in. by 11 in. boards	1 0 0		more than deals.
7 in. and 8 in. battens	24 0 0	..	25 0 0
7 in. and 8 in. boards	1 0 0		more than battens.
Seconds quality	2 0 0		less than best.
Third quality	£2 to £3		less than seconds.
Archangel White Deals—			
Best 3 in. by 11 in.	28 0 0	..	29 0 0
3 in. by 9 in. and 10 in.	26 0 0	..	27 0 0
Seconds, do.	1 10 0		less than best.
U.S. Battens	19 10 0	..	20 0 0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	Per square actual.		
1¼ in. by 7 in. planed and shot	1 8 6	..	1 13 0
1¼ in. by 7 in. planed and matched	1 9 0	..	1 13 0
1 in. by 7 in. planed and shot	1 3 0	..	1 6 0
1 in. by 7 in. planed and matched	1 3 0	..	1 7 6
¾ in. by 7 in. planed, matched and beaded, or V jointed	0 18 0	..	0 19 6
1 in. by 7 in. do.	1 3 0	..	1 5 6
¾ in. by 7 in. do.	0 14 0	..	0 15 0
Columbian or Oregon Pine, best quality	Per standard. 35 0 0	..	40 0 0
Yellow Pine—First, regular sizes	57 0 0		upwards.
Oddments	39 0 0		"
Seconds, regular sizes	43 10 0		"
Oddments	37 10 0		"
Kauri Pine—Planks per ft. cube	0 7 6	..	—
Oak Logs—			
Large, per ft. cube	0 6 0	..	0 6 6
Small " "	0 5 0	..	0 5 6
Wainscot Oak Logs, per ft. cube	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super, as inch	0 1 0	..	0 1 3
¾ in. do. do.	0 0 10	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0 1 0	..	0 1 4
Selected, Figury, per ft. super, as inch	0 1 6	..	0 2 6
Cuba Mahogany	0 1 6	..	0 2 6
Dry Walnut, American, per super, as inch	0 1 0	..	upwards. 0 1 3
French, "Italian," Walnut	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein)	28 0 0	..	34 0 0
Do. do. (Java)	25 0 0	..	27 0 0
American Whitewood planks, per ft. cube	0 6 6	..	0 7 6

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 5 0	..	21 5 0
Plain Compound Girders, ordinary Sections	22 0 0	..	23 0 0
Plain Compound Stanchions	23 0 0	..	24 10 0
Angles, Tees, and Channels, ordinary sections	20 10 0	..	21 10 0
Flitch Plates	20 10 0	..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0	..	14 0 0

(Turning extra.)

METALS (*Continued*).

Per ton, in London.

IRON—	£ s. d.		£ s. d.
Common Bars	15 10 0	..	—]
Staffordshire Crown Bars, good merchant quality	15 10 0	..	16 10 0
Staffordshire "Marked Bars"	17 0 0	..	17 10 0
Mild Steel Bars	16 10 0	..	17 0 0
Steel Bars, Ferro-Concrete quality, £17 10s. basis price.			
Hoop Iron, basis price	18 10 0	..	19 0 0
" " Galvanised	30 0 0	..	35 0 0
(* And upwards, according to size and gauge.)			
Sheet Iron Black—			
Ordinary sizes to 20 g.	18 10 0	..	19 0 0
" " 24 g.	19 10 0	..	20 0 0
" " 26 g.	20 10 0	..	21 0 0
Sheet Iron, Galvanised flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	29 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	29 10 0	..	—
Ordinary sizes to 26 g.	32 0 0	..	—
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	30 0 0	..	—
" " 22 g. and 24 g.	30 10 0	..	—
Ordinary sizes to 26 g.	33 10 0	..	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	28 0 0	..	—
Ordinary sizes, 22 g. & 24 g.	28 10 0	..	—
Ordinary sizes, 26 g.	29 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	19 15 0	..	—
Best Soft Steel Sheets, 22 g. & 24 g.	20 0 0	..	—
Best Soft Steel Sheets, 26 g.	21 15 0	..	—
Cut Nails, 3 in. to 6 in.	18 10 0	..	19 0 0
(Under 3 in., usual trade extras.)			

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

	£ s. d.	
LEAD—Sheet, English, 4 lb. and up	38 0 0	.. —
Pipe in coils	38 10 0	.. —
Soil pipe	41 10 0	.. —
Compo pipe	41 10 0	.. —
NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.		
COPPER—		
Strong Sheet per lb.	0 1 5	.. —
Thin " "	0 1 6	.. —
Copper nails "	0 1 5	.. —
Copper wire "	0 1 5	.. —
BRASS—		
Strong Sheet "	0 1 3	.. —
Thin "	0 1 4	.. —
TIN—English Ingots "	0 1 10	.. —
SOLDER—Plumbers' "	0 0 10	.. —
Tinmen's "	0 1 0	.. —
Blowpipe "	0 1 2	.. —

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

Per Ft.		Per Ft.
15 oz. thirds 5½d.	32 oz. thirds	8½d.
21 oz. thirds 6½d.	" fourths	7½d.
26 oz. thirds 7d.	Fluted Sheet, 15 oz.	5½d.
" fourths 6½d.	" 21 oz.	6½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

Per Ft.	
¼ Rolled plate	4d.
⅜ Rough rolled and rough cast plate	4½d.
½ Rough rolled and rough cast plate	4½d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	5d.
Ditto, tinted	6½d.
Rolled Sheet	4½d.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes per gallon		0 3 9
" " " in barrels "		0 3 10
" " " in drums "		0 4 1
Boiled " " in barrels "		0 4 0
" " " in drums "		0 4 4
Turpentine in barrels "		0 4 1
" in drums "		0 4 4
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		47 15 0
Red Lead, Dry	per ton	46 0 0
Best Linseed Oil Putty	per cwt.	0 11 0
Stockholm Tar	per barrel	1 12 0

GENUINE WHITE LEAD PAINT—

"Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered 59 15 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 0

TO CORRESPONDENTS.

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All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

NEW COMPANIES.

THE undermentioned particulars of new companies recently registered are taken from the Daily Register compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, Chancery-lane, W.C.:—

J. M. DARTOIS & Co., LTD. (142,716). Registered January 14. To carry on business of iron and steel and general metal merchants, flat and plain steel, iron, holloware, steel constructions, agents for and dealers in all descriptions of goods made from iron or steel, dealers in all munitions of war, brick, tile, and chimney manufacturers, builders, etc. Nominal capital, £10,000 in 800 "A" shares of £10 each and 40,000 1s. "B" shares.

MACMULDROW & Co., LTD. (142,779), 168, London-road, Liverpool. Registered January 20. To purchase or otherwise acquire business of timber merchant, sawing and turning mill proprietor, packing-case manufacturer, carried on by Peter Macmuldrow, Liverpool, as Macmuldrow & Co., and to carry on business of house furnishers and furniture removers, builders, contractors, mechanical, electrical and civil engineers, land, estate and house agents. Nominal capital, £6,000 in 6,000 £1 shares.

A. OLBY & SON, LTD. (142,819), 167-169, Beckenham-road, Penge, Kent. Registered January 25. To carry on business of builders, merchants, wholesale and retail ironmongers, timber merchants, dealers in all builders' requisites, ironfounders, engineers, brass founders, mechanical, hydraulic and electrical engineers, painters, house and estate agents, etc. Nominal capital, £6,000 in 6,000 £1 shares.

BRAZIER & SON, LTD. (142,833), 41, London-road, Southampton. Registered January 26. To acquire, take over, and carry on business of builders, contractors, brickmakers, now carried on at above address by W. P. D. Brazier and elsewhere as Brazier & Son, decorators and furnishers, house and estate agents, engineers, miners, and stone cutters, iron and steel smelters, and to deal in building material of all kinds. Nominal capital, £7,000 in 7,000 £1 shares.

LOVE & Co., BUILDERS, LTD. (142,824), 34-5, Exeter-street, Strand, W.C. Registered January 25. Nature of business indicated by title. Nominal capital, £4,000 in 4,000 £1 Ordinary shares.

EKACERTIN, LTD. (142,785), 1, Austin Friars, E.C. Registered January 21. To acquire, take over, and construct machinery and plant or rights and licences in relation to machinery, plant, processes, and inventions, and carry on the business of general manufacturers and merchants, brokers, contractors, shippers, builders, etc. Nominal capital, £5,000 in 4,000 £1 Preference shares and 20,000 1s. Deferred shares.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless the amount of the Tender is stated.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

CUPAR.—For painting work at the new buildings of the Fife and Kinross District Asylum:—

J. C. Roland & Sons, Leven*	£679 15

LONDON.—For Nos. 44-49, Norland-road, Shepherd's Bush, W. Messrs. T. Jay Evans & Son, M.S.A., architects, 34-35, High Holborn, W.C.:—

J. S. Dunn & Co.	£6,367
W. Brown & Sons, Ltd.	5,230
G. Parker & Sons	5,159
Courtney & Fairbairn, Ltd.*	4,985

LONDON.—For painting work at the new West Norwood Fire-station, for the London County Council:—

G. Parker & Sons	£489 0 0
W. Akers & Co., Ltd.	447 0 0
J. & C. Bowyer, Ltd.	407 0 0
G. Godson & Sons	401 0 0
A. T. Peyton	385 7 10
J. S. Fenn	286 14 10
Triggs & Co.*	264 0 0

PENZANCE.—For building a shed on the west side of the dock, for the Quay Committee of the Town Council:—

Pochin & Co., Ltd.*	£1,200

WEYMOUTH.—For the erection of a boundary wall at Granville-road, Weymouth, for the Town Council:—

Conway, Ltd.	£287 0 0
Pattinson & Son	283 14 6
J. A. Parsons	275 0 0
A. E. Whettam*	265 0 0

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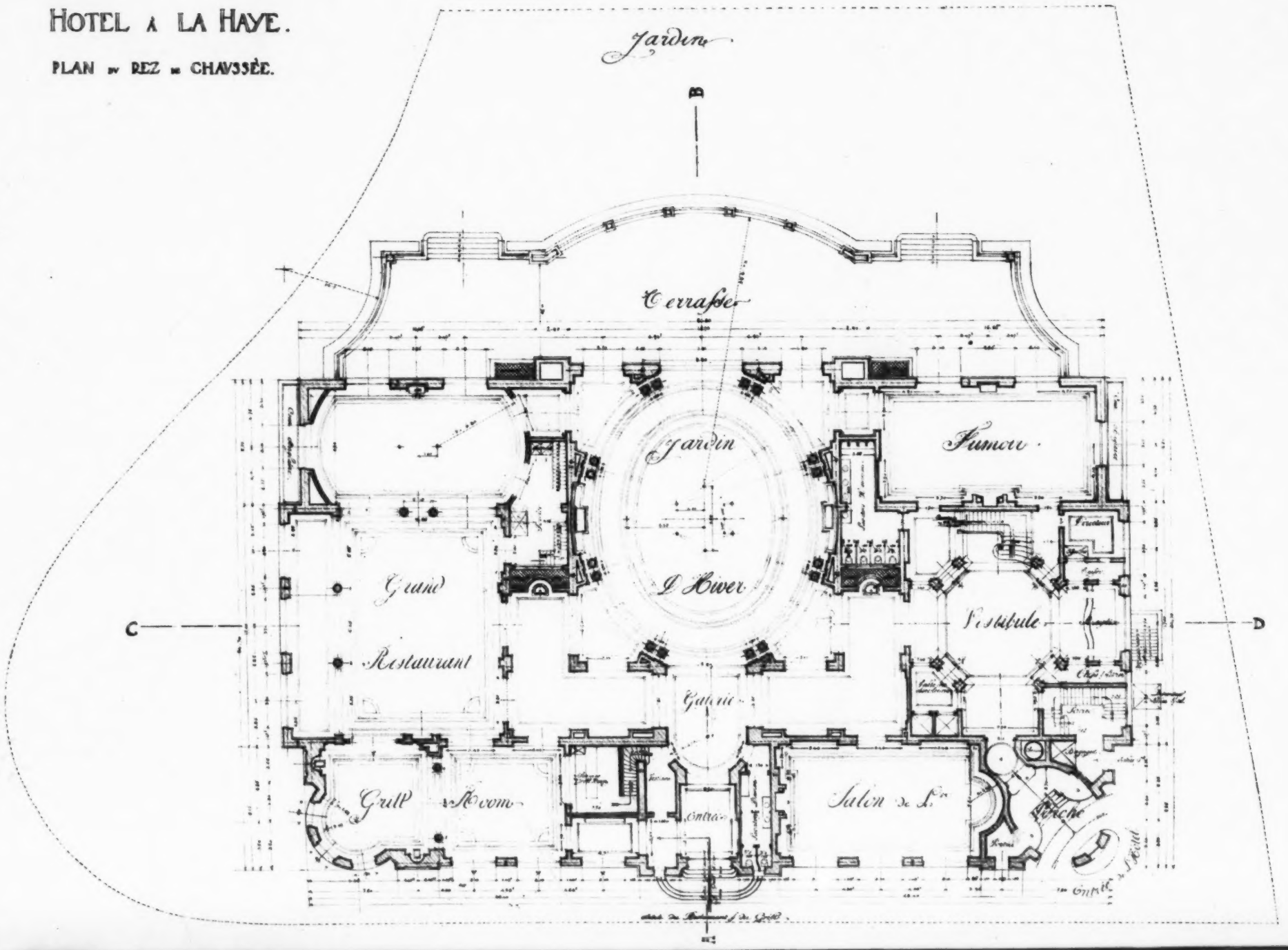

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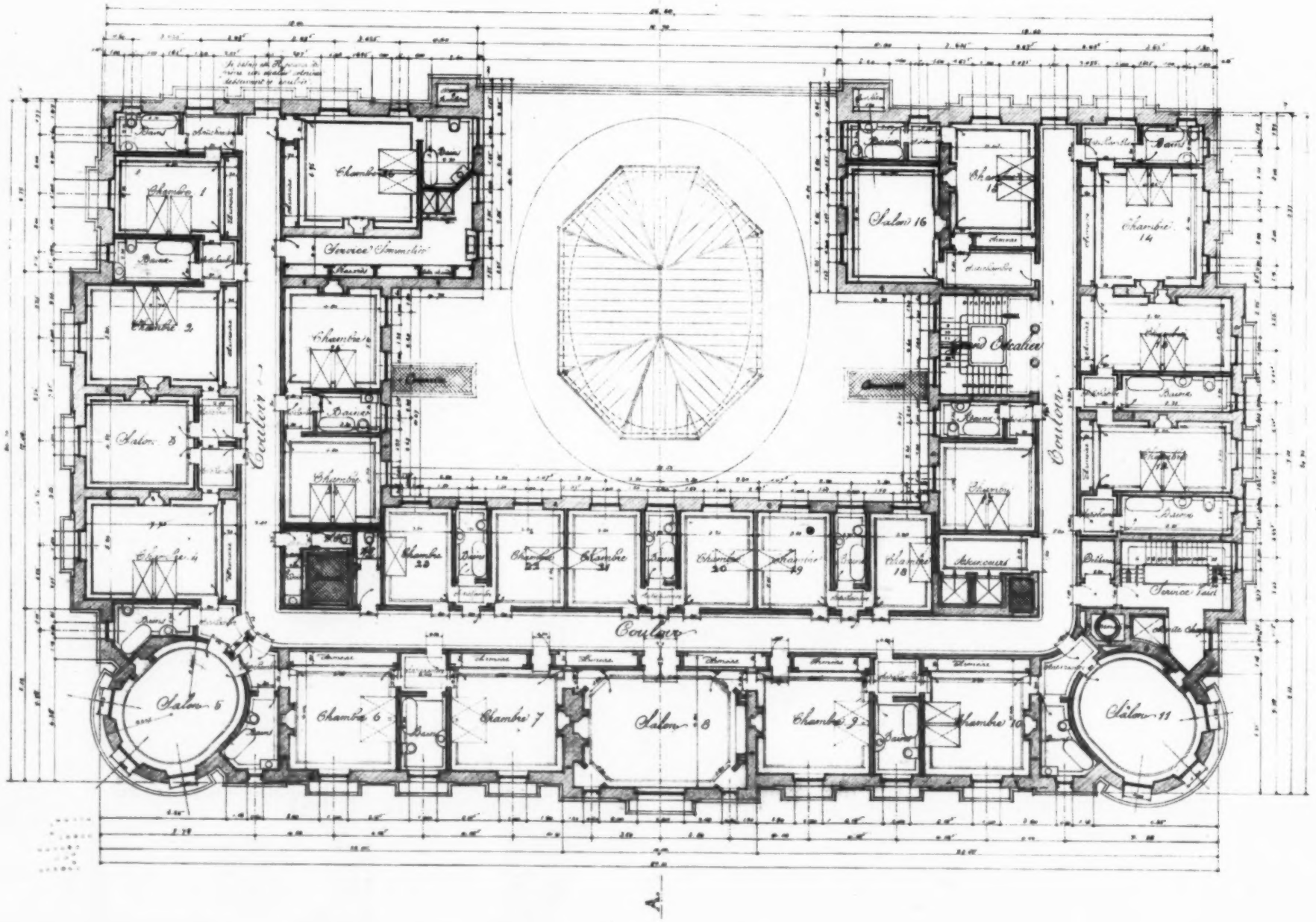

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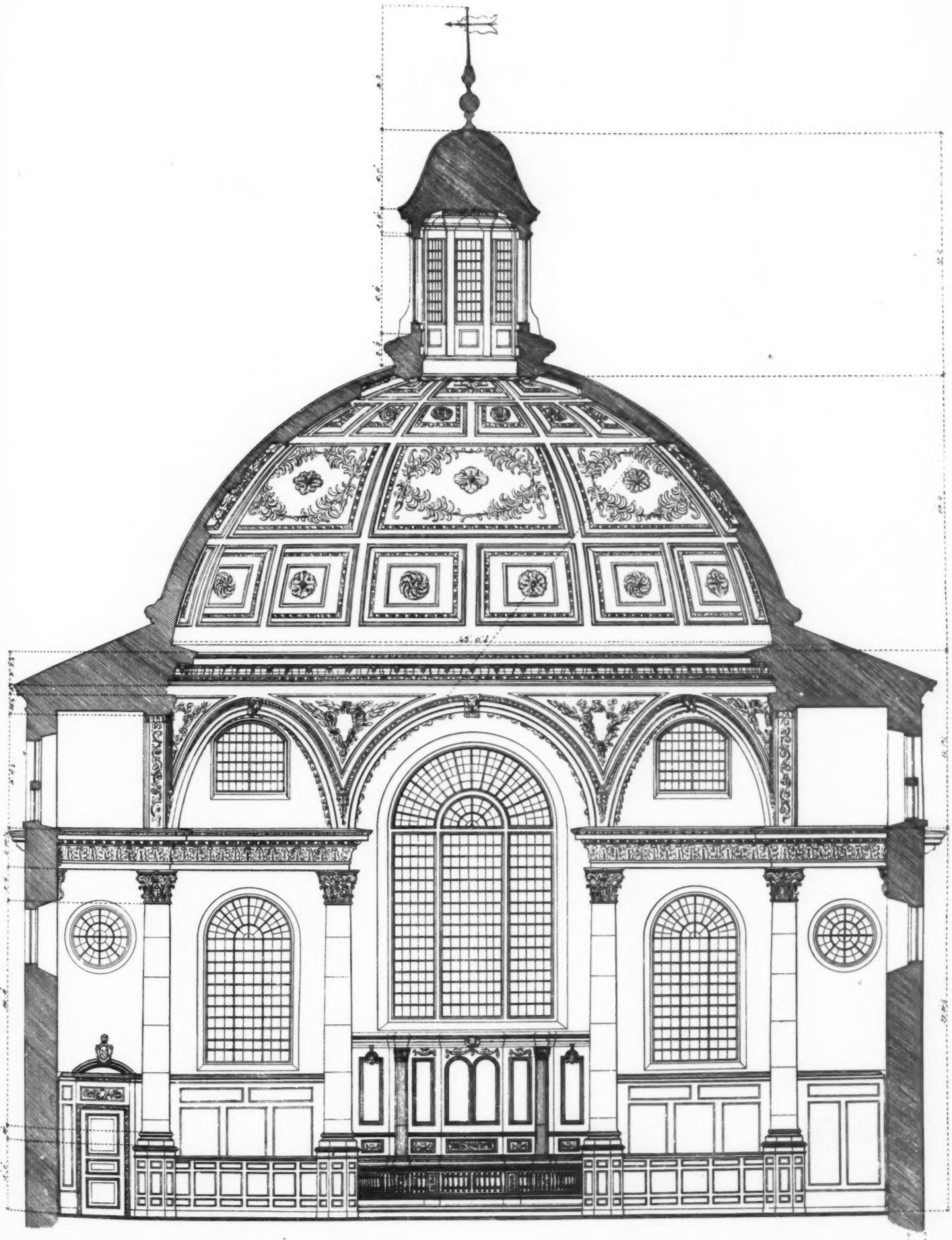

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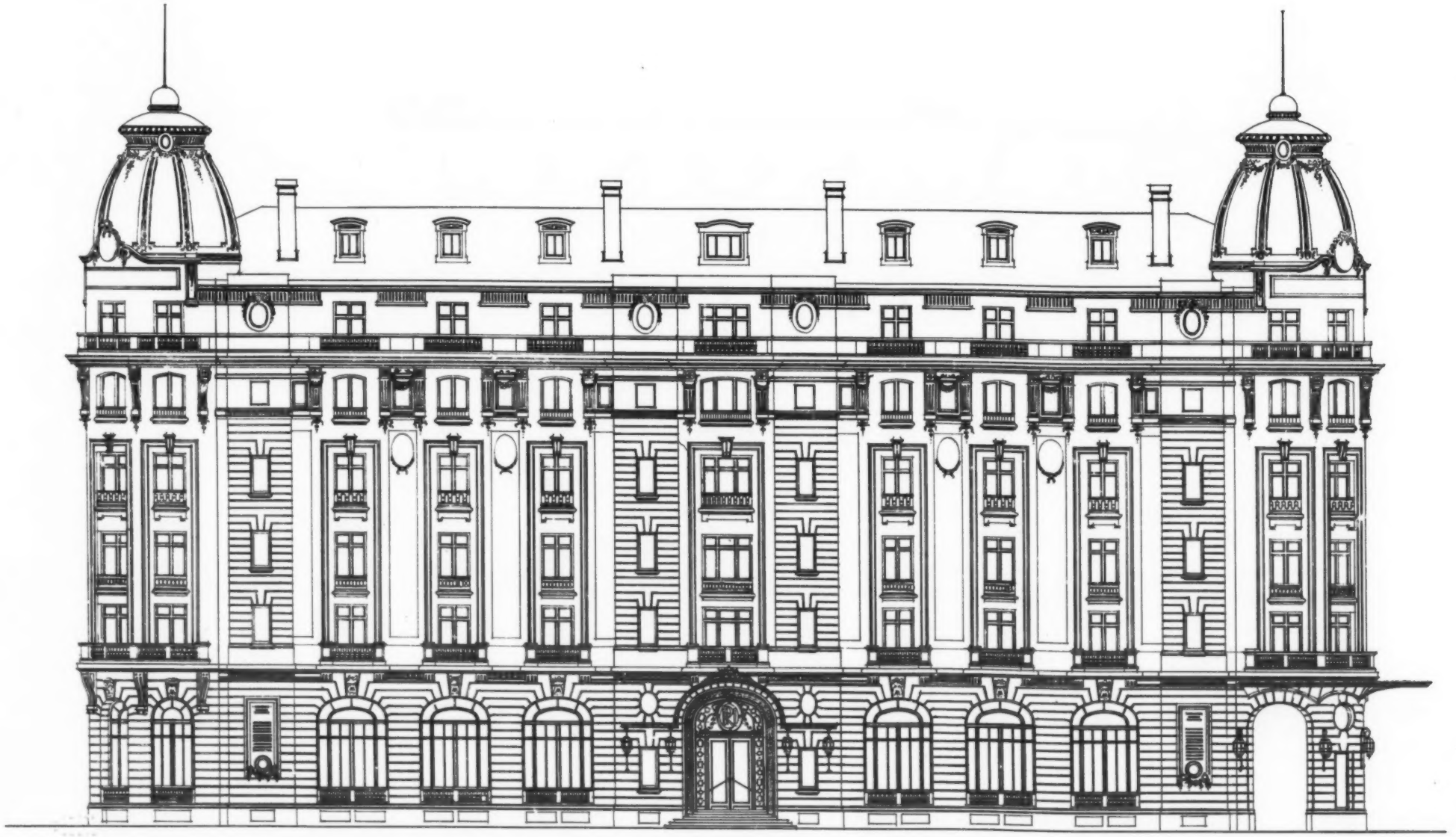

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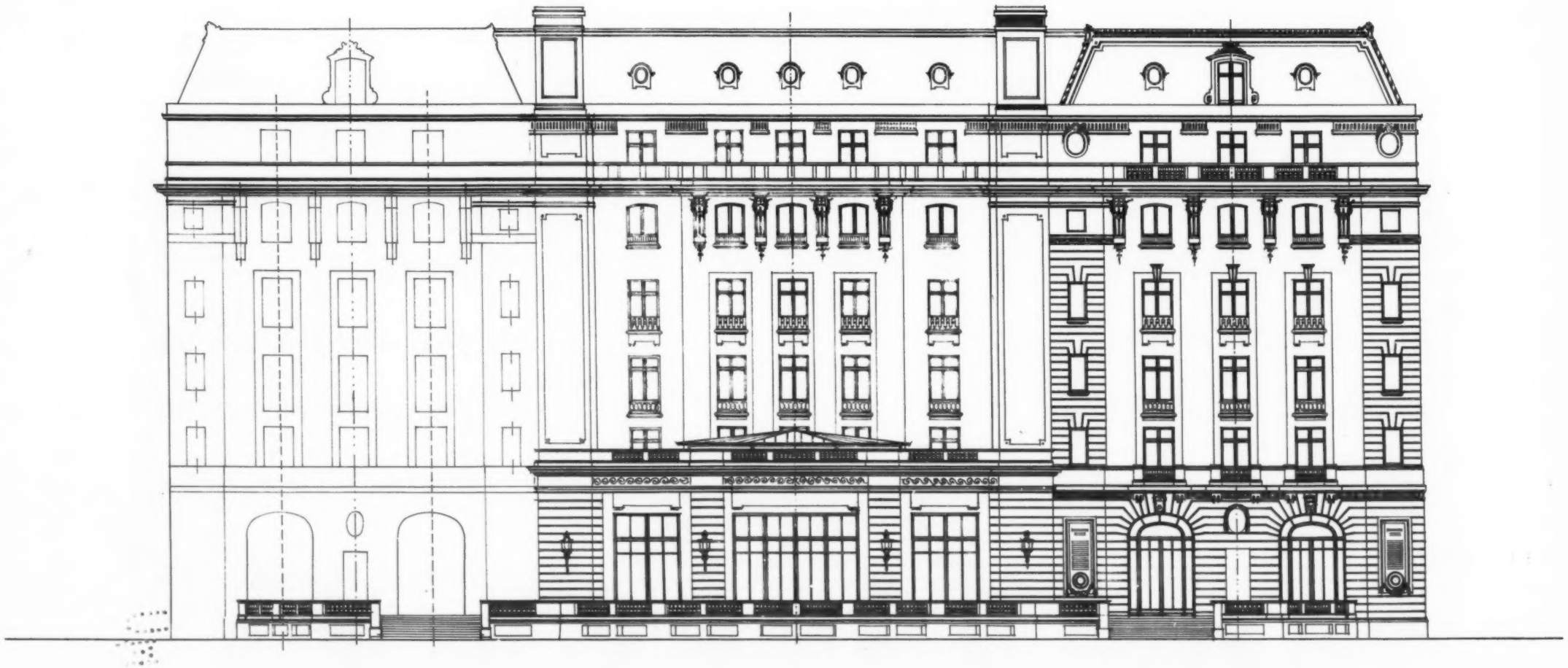

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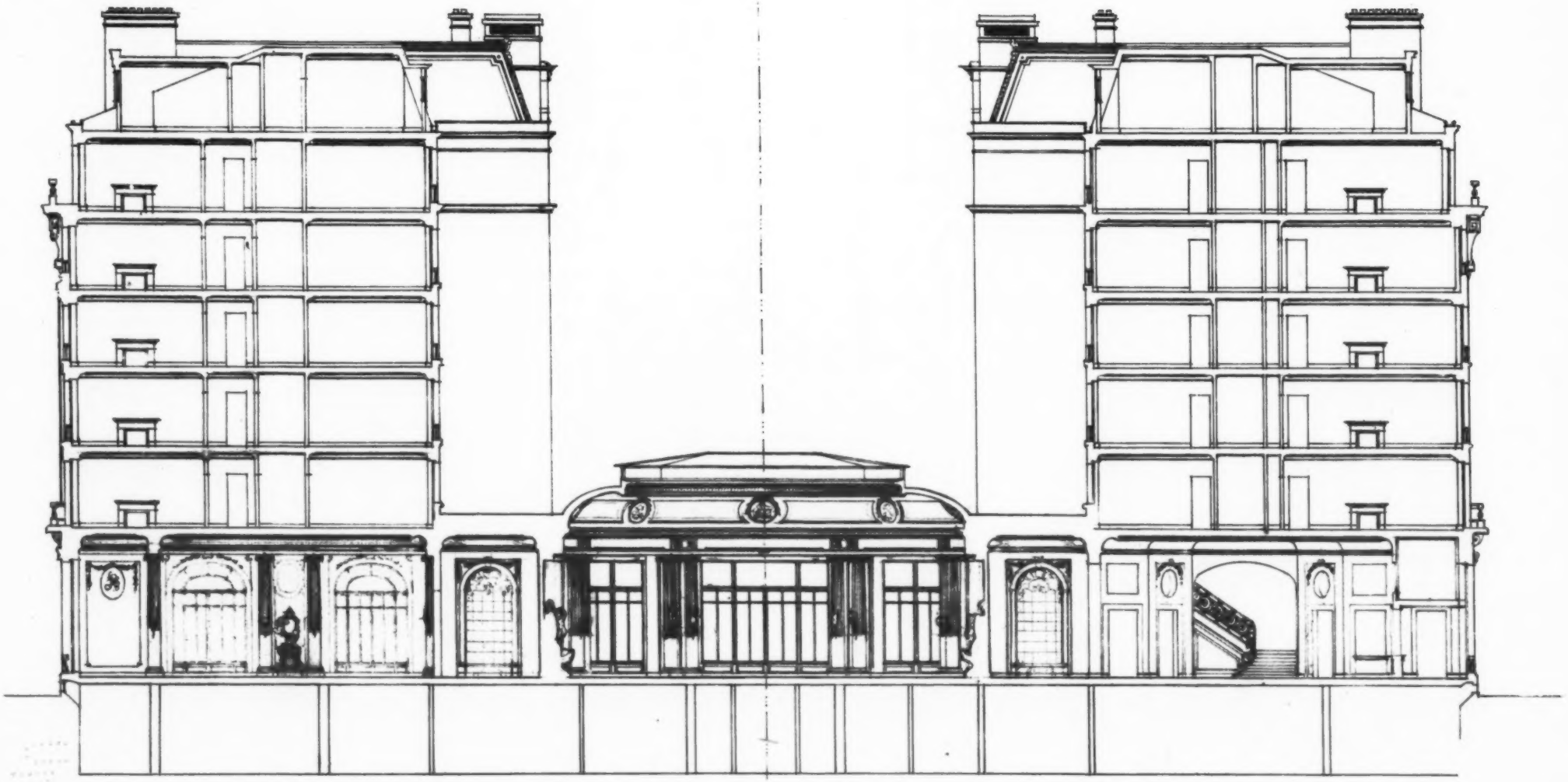

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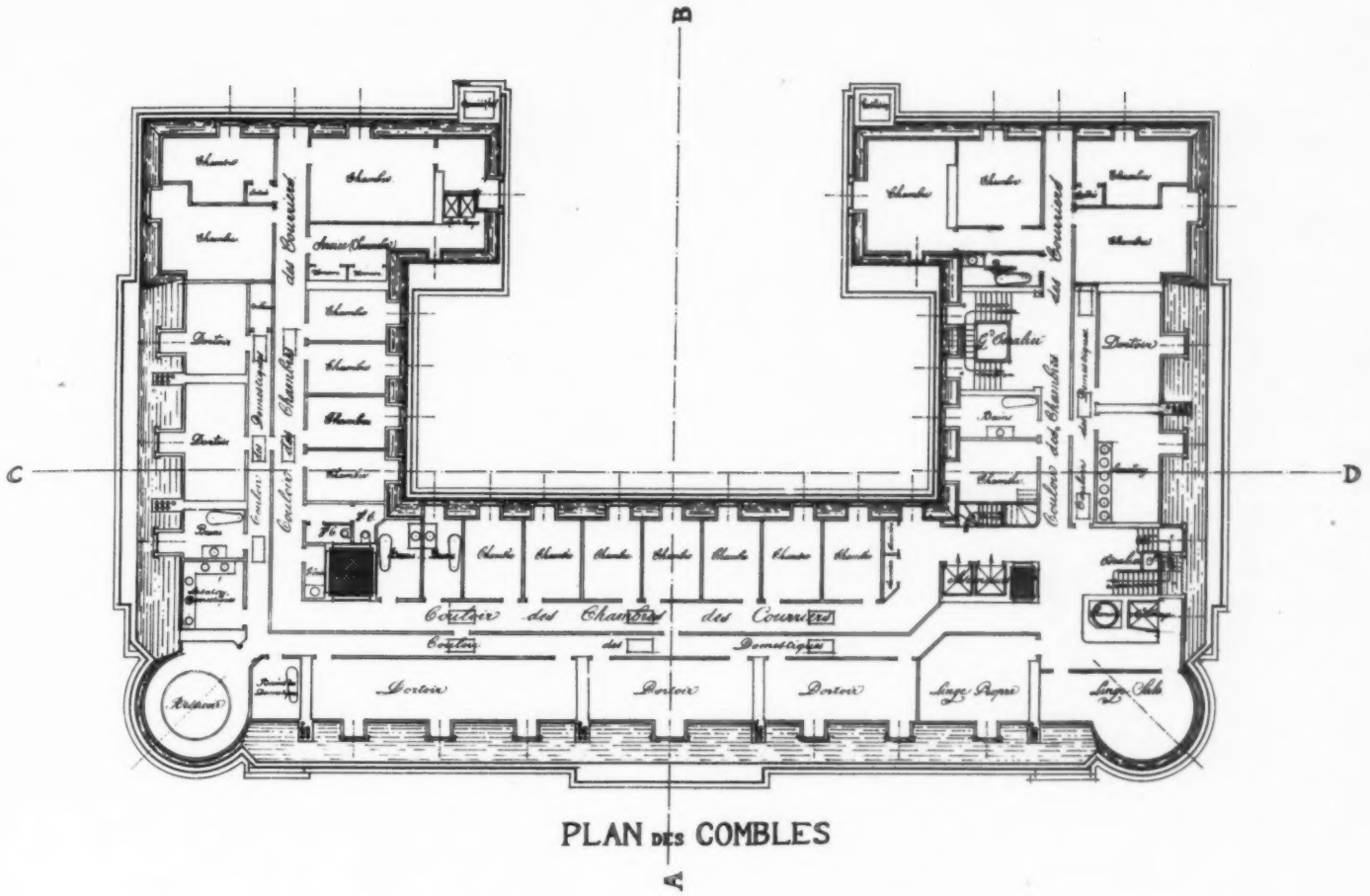

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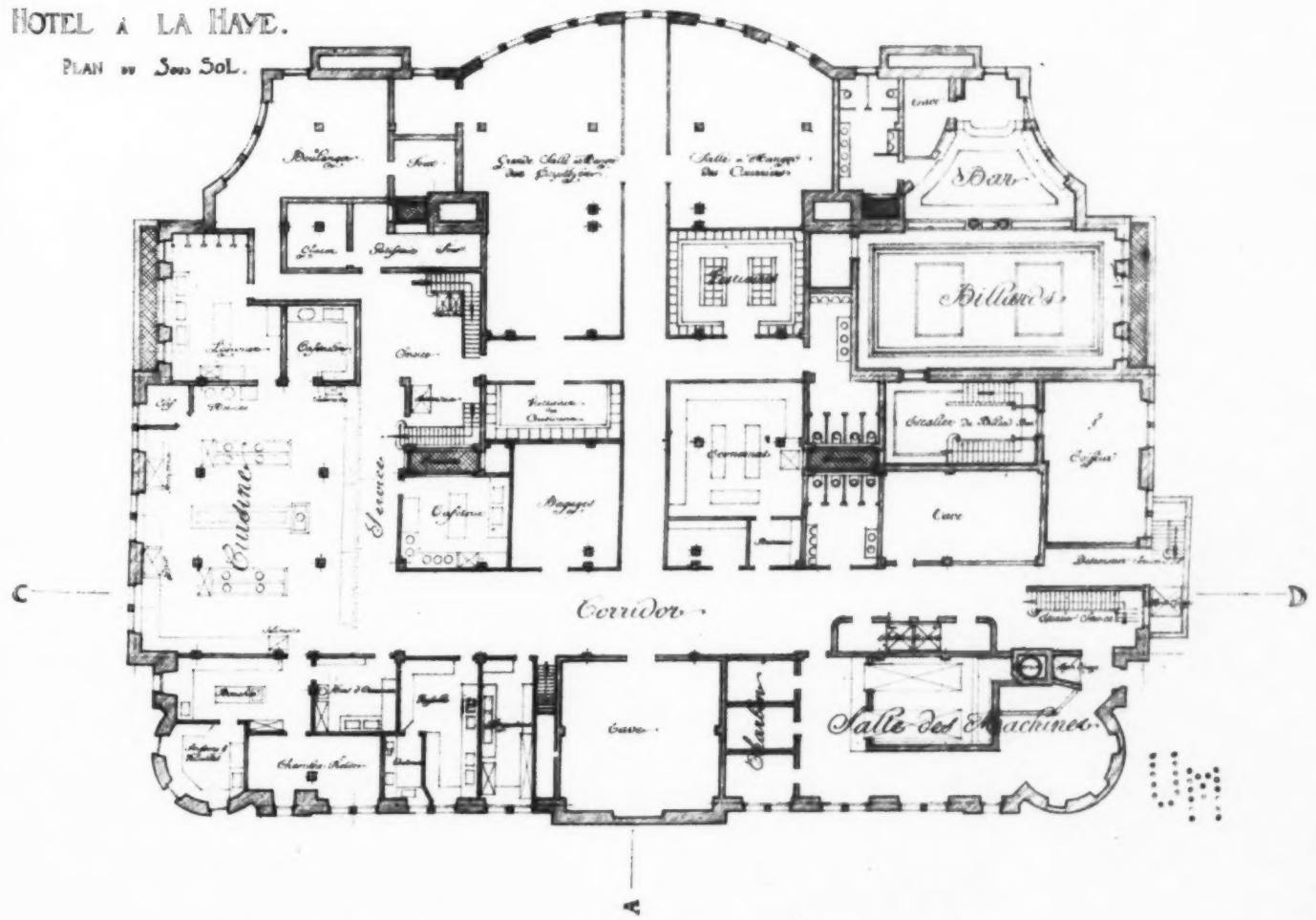

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